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Although perceived ethnic discrimination and acculturative stress increase risk for depressive symptoms, less is known about factors that moderate the impact of these cultural challenges on psychological adjustment for first- and second-generation migrant-origin college students. Ethnic identity has been presumed to buffer the impact of cultural stressors on psychological adjustment, but studies have demonstrated mixed results. Because emerging adulthood is a relevant time in social identity development, it is important to clarify the role that ethnic identity plays during psychological adjustment when these individuals are faced with culturally based stress. This dissertation integrated acculturation theory and social identity theory to examine the conditions under which positive ethnic-racial affect served as a moderating factor between cultural stressors and depressive symptoms. It was hypothesized that the moderating impact of positive ethnic-racial affect would vary by other-group orientation, nativity status, and gender, in accordance with social identity theory and rejection sensitivity theory. A multicultural sample of 290 emerging adult students (aged 18-25) completed electronic self-report questionnaires on a college campus in the Southeastern United States. Results provided stronger support for social identity theory such that stronger positive ethnic-racial affect demonstrated inverse associations with depressive symptoms across the sample, with a notable buffering impact for women. Trend-level results demonstrated a protective effect against depressive symptoms when stronger positive ethnic-racial affect was paired with

greater levels of other-group orientation. In contrast, males with stronger positive ethnic-racial affect demonstrated statistically significant increases in depressive symptoms as perceived ethnic discrimination increased, lending some support for rejection sensitivity theory. Implications for clinical practice and integrative collegiate programming are discussed.

CULTURAL STRESSORS AND DEPRESSIVE SYMPTOMS: WHEN IS POSITIVE
ETHNIC-RACIAL AFFECT PROTECTIVE FOR IMMIGRANT-ORIGIN
EMERGING ADULTS?

by

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	v
LIST OF FIGURES.....	vi
CHAPTER	
I. INTRODUCTION.....	1
II. METHODS.....	37
III. RESULTS.....	42
IV. DISCUSSION.....	53
REFERENCES.....	74
APPENDIX A. TABLES.....	107
APPENDIX B. FIGURES.....	114
APPENDIX C. QUESTIONNAIRES.....	117

LIST OF TABLES

	Page
Table 1. Multiethnic Group Classifications based on Parent Cultural Background.....	107
Table 2. Confirmatory Factor Analysis Fit Indices for a Two-Factor Model Involving Perceived Ethnic Discrimination Stress and Acculturative Stress.....	108
Table 3. Pearson Correlations and Descriptive Statistics.....	109
Table 4. Regression Analyses Exhibiting the Final Models for Perceived Ethnic Discrimination Stress.....	110
Table 5. Conditional Effect of Perceived Ethnic Discrimination Stress by Positive Ethnic-Racial Affect Interaction across Gender for Model 3.....	111
Table 6. Conditional Effect of Perceived Ethnic Discrimination Stress on Depressive Symptoms at Values of Gender for Model 3.....	112
Table 7. Regression Analyses Exhibiting the Final Models for Acculturative Stress.....	113

LIST OF FIGURES

	Page
Figure 1. General Conceptual Model.....	114
Figure 2. Hypothesized Relations for Confirmatory Factor Analysis.....	115
Figure 3. Graphical Results.....	116

CHAPTER I

INTRODUCTION

Immigrant-origin adults are increasingly represented on college campuses in the United States. First- and second-generation migrants face unique acculturation challenges when they navigate two or more cultures, and these challenges are associated with negative mental health outcomes (Berry, 2006). Concurrently, depressive symptoms are higher among college students compared to the general population (Ibrahim, Kelly, Adams, & Glazebrook, 2013), and prevalence rates of depression among emerging adults are increasing (Beiter et al., 2015; Eisenberg, Gollust, Golberstein, & Hefner, 2007; Zivin, Eisenberg, Gollust, & Golberstein, 2009). These trends underscore the importance of better understanding the mental health of college students from diverse backgrounds (Castillo & Schwartz, 2013; Castillo, Zahn, & Cano, 2012), especially immigrant-origin emerging adults (Grasmuck & Kim, 2010).

Culture-related stressors such as perceived ethnic discrimination and acculturative stress are risk factors for increases in mental health difficulties among immigrant-origin college students. Although it was originally theorized that ethnic identity protects against the negative impact of these stressors, results are generally mixed (Pascoe & Richman, 2009; Smith & Silva, 2011). Some studies have demonstrated a buffering effect for ethnic identity on the relation between cultural stressors and mental health outcomes such as depressive symptoms, others have found that ethnic identity exacerbates this relation,

and many studies have found no statistically significant impact on this relation (Pascoe & Richman, 2009). Given these mixed results, and because emerging adulthood is a relevant time in sociocultural identity development (Schwartz et al., 2014), it is important to clarify the role that ethnic identity plays during psychological adjustment. This dissertation integrates acculturation theory (Berry, 2006; Schwartz, Unger, Zamboanga, & Szapocznik, 2010) and sociocultural identity theory (Phinney, 1990; Tajfel, 1974) to examine the conditions under which a specific component of ethnic identity serves as a moderating factor between culture-related stressors and depressive symptoms (Heppner, Wei, Neville, & Kanagui-Muñoz, 2014; Hernandez, 2009).

Cultural Stress and Psychological Adjustment

Culture involves visible and invisible elements such as clothing, art, rules, beliefs and values that are distributed throughout a group of people and shared through interpersonal relations (Rudmin, 2009; Shore, 2002). Acculturation occurs when two or more cultures come into contact with one another, resulting in sociocultural change to individuals and groups within both cultures (Sam, 2006; Sam & Berry, 2006). Acculturation, therefore, involves the extent to which heritage-culture practices, values, and identifications are maintained and receiving-culture practices, values, and identifications are acquired (Schwartz, Montgomery, & Briones, 2006; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). For this dissertation, the term *ethnic* is a global term synonymous with both *ethnic-racial-cultural* (Cross & Cross, 2008) and *ethnocultural* (Berry, Phinney, Sam, & Vedder, 2006), used to reflect one's identification with a shared cultural or ethnic ancestry, as well as their psychological and sociocultural experiences

associated with this particular group (Umaña-Taylor et al., 2014). In culturally plural societies such as the United States, ethnic minority groups come into contact with both the ethnic majority group and other ethnic minority groups. This process is not without challenges.

Acculturative stress and perceived ethnic discrimination stress. Acculturative stress is a distinct type of stress rooted in acculturation (Berry, 2006). Acculturation-related stressors include language difficulties, daily resettlement hassles, homesickness, challenging intercultural relations, pressure to acquire national culture or maintain heritage culture, and family conflict (Rudmin, 2009). Another specific stressor associated with acculturation is perceived ethnic discrimination, or unfair treatment that is attributable to one's ethnic background (Contrada et al., 2000). Both of these stressors have been implicated in psychological adjustment outcomes of immigrant-origin emerging adults.

Prior theory and empirical research have included both acculturative stress and perceived ethnic discrimination stress within conceptualization and measurement of general cultural stress (Berry, 2006), but recent scholarship suggests these may be two distinct classifications. One author used a grounded theory model to integrate and distinguish between cultural stress experiences among an ethnically diverse sample of migrant adults (Yakushko, 2010). Based on these self-reported experiences, Yakushko (2010) organized these stressors into categories, two of which were acculturative stress and discrimination. Acculturative stressors included stressors associated with adapting to and interfacing with a new culture, such as language difficulties. Discrimination

involved unfair treatment and negative views based on one's ethnic background and immigrant status. Yakushko (2010) concluded that acculturative stressors and ethnic discrimination are both culture-related stressors that may be distinct from one another.

Another author supported this distinction in her dimensional concept analysis of 33 articles discussing culture-related stressors for recently arrived Latinos in the United States (Caplan, 2007). She acknowledged that, from a simplistic unidimensional perspective, acculturative stress involves instrumental and environmental stressors associated with coming into contact with another culture as one progresses linearly through the post-migration process. From a more complex and all-encompassing bidimensional perspective, other facets of the migrant experience include stressors such as perceived ethnic discrimination. Given the similarity yet distinction between acculturative stress and perceived ethnic discrimination, Caplan (2007) acknowledged the importance of clarifying psychological constructs (consistent with Schwartz, Unger, Zamboanga, & Szapocznik, 2010) and the way in which culture-related stress is operationalized and measured. She also recognized the importance of distinguishing between mere presence of stress (i.e. objective stress), subjective perceptions of stress (i.e. stress appraisal; Lazarus & Folkman, 1984), and physiological responses to stress (e.g. cortisol; Cohen, Kessler, & Gordon, 1995). She reiterated the importance of assessing stress appraisal, since it is subjective evaluations of stress that are most predictive of health outcomes compared to mere presence of stress (Caplan, 2007).

Although acculturative stress and perceived ethnic discrimination are broadly considered culture-related stressors, specific measures of cultural stress vary with respect

to whether perceived ethnic discrimination is distinct from (e.g. Hispanic Stress Inventory-Immigrant version; Cervantes, Padilla, & Salgado de Snyder, 1991), or subsumed under, *acculturative stress* (Rudmin, 2009). Because it is important for researchers to clarify psychological constructs, especially within the study of culture and psychology (Rudmin, 2009; Schwartz, Unger, Zamboanga, & Szapocznik, 2010), this dissertation operationally distinguishes between acculturative stress and perceived ethnic discrimination, consistent with Yakushko (2010) and Caplan (2007). As such, the terms *culture-related stressors* and *cultural stressors* are used to indicate a higher-order category, which includes both acculturation stressors and perceived ethnic discrimination stressors.

Cultural stressors and depressive symptoms. Greater perceived culture-related stressors are related to poorer psychological adjustment outcomes such as depressive symptoms for immigrant-origin young adults (American Psychological Association, n.d.; Organista, Organista, & Kurasaki, 2003). This relation has been especially pronounced when cultural stressors exceed an individual's capacity to cope (Berry, 2006). This is because increases in psychological distress, including depressive symptoms, are associated with reduced sense of control, reduced self-esteem, an inferior sense of social status, and less adaptive cognitive reactions such as rumination or feelings of hopelessness, for example (Huynh, Devos, & Goldberg, 2014; Yoo & Lee, 2005).

Specifically, greater perceived ethnic discrimination is associated with more depressive symptoms (Pascoe & Richman, 2009) for immigrant-origin college students in the U.S. across generational and cultural groups, including Asian (Cheng, Lin, & Cha,

2015), Vietnamese (Han & Lee, 2011; Lam, 2007), and Latino backgrounds (Arbona & Jimenez, 2014), and in culturally diverse samples (Miranda, Polanco-Roman, Tsypes, & Valderrama, 2013; Polanco-Roman & Miranda, 2013). Furthermore, emerging adults are more likely to experience perceived ethnic discrimination (Kessler, Mickelson, & Williams, 1999; Pérez, Fortuna, & Alegría, 2008) and depression (Alegría, Sribney, Woo, Torres, & Guarnaccia, 2007; Kim & Choi, 2010; Williams et al., 2007) compared to their older-aged counterparts, thus highlighting the importance of better understanding the relation between discriminatory experiences and depressive symptoms in college students.

Similarly, greater acculturative stress is associated with more depressive symptoms for immigrant-origin college students in the U.S. across generational statuses and cultural backgrounds, such as African (Donovan et al., 2013), Latin American (Castillo et al., 2015; Donovan et al., 2013), Mexican (Cano, Castillo, Castro, de Dios, & Roncancio, 2014; Crockett et al., 2007), and Asian groups (Donovan et al., 2013; Hwang & Ting, 2008; Rice, Choi, Zhang, Morero, & Anderson, 2012), and in culturally diverse samples (Polanco-Roman & Miranda, 2013). It is critical to better understand specific factors that might increase or decrease risk for depressive symptoms when immigrant-origin college students are faced with cultural stressors.

Cultural Identity and Positive Ethnic-Racial Affect

Identity formation is relevant across the lifespan but most critical for adolescents and young adults (Smith & Silva, 2011). While emerging adulthood has been conceptualized as ages 18 to 25 (Arnett, 2000), some empirical studies examining ethnic

identity and psychological adjustment in college-age samples include participants up to age 30 or 35 (e.g. Clark, 2014; Jensen & Arnett, 2012). One meta-analysis set a cutoff point at age 40 and found different effect sizes for ethnic identity and adjustment for those under age 40 versus over age 40, such that statistically significant effects were stronger for the younger group (Smith & Silva, 2011). This is likely because younger individuals are still settling on particular identity-related beliefs and behaviors, which are more developmentally salient in young adulthood (Jensen & Arnett, 2012; Kroger & Marcia, 2011; Kroger, Martinussen, & Marcia, 2010; Syed & Azmitia, 2009).

A reordering of peer groups and a greater capacity for abstract thinking, metacognitive abilities, introspection, and social-cognitive skills facilitates formation of ethnic identity during adolescence, resulting in changing social demands (Umaña-Taylor et al., 2014). During this time, adolescents begin to negotiate different identities and become more aware of components related to nuanced sociocultural identifications such as public regard (i.e. beliefs about others' judgments of one's group; Sellers & Shelton, 2003). These processes continue into emerging adulthood, but are accompanied by a deeper reflection of one's identity, construction of personal narratives, and greater cognitive flexibility (Umaña-Taylor et al., 2014). Peer groups continue to change and evolve as the emerging adult gains greater independence, and an elaboration and narrowing of one's identity coincides with a new understanding of the self in relation to the world around them (Umaña-Taylor et al., 2014).

Although identity formation is a lifelong process (Marcia, 2010), it is critical for adolescents and young adults because it is most associated with psychological well-being during this phase of life (Smith & Silva, 2011). Bhatia and Ram (2001) contend that individuals make meaning of their identity through involvement in daily sociocultural relations. College campuses offer an optimal milieu for interpersonal interactions through peer diversity, coursework, and social groups, which create opportunities to enhance one's awareness of the social self and think about their ethnic identity in new ways (Azmitia, Syed, & Radmacher, 2008; Umaña-Taylor & Guimond, 2010) via identity-challenging experiences (Marcia, 2010).

Erikson contended that one's identity is accompanied by an integration of accrued experience and social roles (Erikson, 1968). He emphasized the importance of context on the development of identity, and the dynamic exchange between person and their environment, including similar and different others within this social reality (Erikson, 1959). The social reality for immigrant-origin individuals living in the Southeastern United States is a multicultural one.

Ethnic identity is the cultural component of social identity (Liebkind, 2006). It is a general term referring to the cultural self in relation to cultural others, as well as the sense of identification with others in that same ethnic group (Phinney, Jacoby, & Silva, 2007). There are numerous constructs that constitute ethnic identity, including process components such as exploration and commitment, and content components such as salience, centrality, ideology, and public regard (Sellers, Smith, Shelton, Rowley, & Chavous, 1998; Syed & Azmitia, 2008; Umaña-Taylor et al., 2014).

Various components of ethnic identity manifest in different or similar ways across ethnic groups, depending on the particular component being examined. Some elements of ethnic identity appear to vary by ethnic group. For example, public regard may have different connotations for individuals from first- versus second-generation statuses (Perkins, Wiley, & Deaux, 2014), and for individuals from different ethnic groups. Specifically, individuals may perceive that society is inclined to hold differential attitudes toward Asian compared to Black individuals (e.g. *model minority* may not apply to all groups; Bikmen, 2011; Maxwell Johnson, Robinson Kurpius, Dixon Rayle, Arredondo, & Tovar-Gamero, 2005).

On the other hand, some components of sociocultural identity may be experienced similarly across ethnic groups. One example includes positive ethnic-racial affect, which involves one's own evaluation of, and affect toward, their ethnocultural group (Rivas-Drake, Seaton, et al., 2014; Rivas-Drake, Syed, et al., 2014). Positive ethnic-racial affect is sometimes referred to as ethnic belonging, ethnic affirmation, private regard, group esteem, or ethnic pride (Rivas-Drake, Seaton, et al., 2014; Umaña-Taylor et al., 2014). Positive ethnic-racial affect is implicated in psychological adjustment (Smith & Silva, 2011) and is a core motive for group membership regardless of one's ethnic background (Fiske, 2010). Positive ethnic-racial affect appears to manifest similarly across ethnic groups and generational statuses (e.g. Kiang, Yip, Gonzales-Backen, Witkow, & Fuligni, 2006; Maxwell Johnson et al., 2005; Perkins et al., 2014; Wiley, Perkins, & Deaux, 2008), since belonging and affirmation are universal affective experiences. As such,

positive ethnic-racial affect is a pertinent and useful construct to examine identity in multiethnic and multigenerational samples, and will therefore be the focus of this dissertation. Given the paucity of research solely on positive ethnic-racial affect, studies examining *ethnic identity* in general will also be included in this review when relevant.

Frameworks for Understanding the Role of Ethnic Identity on Stress and Adjustment

Culture becomes salient when two societies come into contact with one another, and one's social group membership becomes salient in multigroup settings (Tajfel, 1974). Social identity (Tajfel, 1974) and self-categorization (Turner & Oakes, 1986) theories broadly maintain that group membership is important for understanding sense of self. These are useful theoretical bases from which to study culture because they provide fundamental insight into intergroup relations (Liu 2012).

Social identity theory posits that social identity is the component of one's self-concept derived from membership in a social group, and positive affective significance is often associated with a sense of belonging to this group (Tajfel, 1974; Umaña-Taylor et al., 2014). One application of social identity theory (Tajfel & Turner, 2004) is that strong ethnic identity will buffer the impact of everyday stressors on psychological adjustment because stronger ethnic identity is related to greater sense of intergroup connection in the form of, for example, social support or pride for one's group (e.g. Cheryan & Tsai, 2007). Normative and manageable culture-related stressors may prompt one to engage cognitive coping strategies such as thinking about positive and unique aspects of the cultural group to which they have a strong belonging (Lee, Lee, Hu, & Kim, 2014; Yoo & Lee, 2009).

Self-categorization theory provides an alternative foundation for understanding psychological implications of ingroup membership (Fiske 2010). That is, social identities give way to socially construed categories which provide a basis for constructing ingroups and outgroups, which in turn provides a basis for understanding intergroup conflict (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987, cited in Smith & Silva, 2011). As such, individuals are sensitive to contextual factors (such as intergroup relations) that are relevant to their sociocultural identities and group membership. A more specific model for understanding the impact of intergroup conflict on psychological adjustment involves rejection sensitivity theory (Downey & Feldman, 1996), which purports that strong ethnic identity will exacerbate or worsen the impact of perceived ethnic discrimination on mental health outcomes, since rejection can leave one feeling disconnected from their group, psychologically taxed, and feeling anxious about future rejections (Donovan et al., 2013; Downey & Feldman, 1996; Iturbide, Raffaelli, & Carlo, 2009; Yoo & Lee, 2009). Intergroup conflict such as perceived ethnic discrimination may pose a threat to one's personal sociocultural identity and sense of belongingness to their cultural group (Arbona & Jimenez, 2014; Padilla & Perez, 2003). Therefore, strong ethnic identity may heighten one's awareness to perceived ethnic discrimination, which in turn may intensify the impact of perceived ethnic discrimination on health (Arbona & Jimenez, 2014; Lee et al., 2014; Sellers & Shelton, 2003; Syed & Azmitia, 2010).

It has been argued that, when faced with perceived ethnic discrimination, individuals may react in a way that is consistent with social identity theory, such that perceived ethnic discrimination brings about positive thoughts about one's group or

prompts attainment of intragroup social resources; however, individuals with a stronger ethnic identity more often attend to interethnic dynamics, are more likely to experience perceived ethnic discrimination, and are more likely to experience distress as a result of perceived ethnic discrimination (Smith & Silva, 2011). The lack of clear and consistent findings warrants a clearer understanding of the relation between cultural stress, ethnic identity, and mental health outcomes. Further, theoretical models and empirical studies have primarily focused on perceived ethnic discrimination, and less is known about the unique impact of acculturative stress. Ethnic identity may play differential roles when immigrant-origin emerging adults are faced with acculturative stress versus perceived ethnic discrimination stressors (Arbona & Jimenez, 2014).

The relation between cultural stressors, ethnic identity, and adjustment outcomes may operate differently for ethnic minority and ethnic majority individuals (Smith & Silva, 2011). Due to general cultural differences, ethnic minority immigrant-origin college students may have different acculturation experiences compared to immigrant-origin White students (Abe, Talbot, & Geelhoed, 1998; Sodowsky & Plake, 1992; Wei, Liao, Heppner, Chao, & Ku, 2012). Also, experiences within a social milieu and on college campuses with respect to perceived ethnic discrimination and psychological adjustment appears to be different for ethnic minority students compared to the experience of the ethnic majority, White counterparts (Cokley, Hall-Clark, & Hicks, 2011). Further, ethnicity may not be as salient or important for White U.S. Americans (Phinney, 1996; Smith & Silva, 2011). Because ethnic identity may play out differently for White and minority groups—and in the interest of choosing a target population—one

set of authors decided to focus their meta-analysis examining ethnic identity and well-being on people of color (Smith & Silva, 2011). For a similar reason, and because hypotheses will be based on current research that has examined primarily minority immigrant-origin college students, this dissertation focuses on the experience of non-White immigrant-origin (i.e. first or second generation) college students.

What follows is an examination of findings illustrating the moderating role of ethnic identity, with attention to both buffering and exacerbating effects, and the impact of these on depressive symptoms. Where possible, this review highlights depressive symptoms but discusses other psychological adjustment outcomes when relevant, as there has been limited literature examining solely depressive symptoms as an outcome. Also, some studies included in this review contain samples with broad age ranges, since college students sometimes include adults in their later 20's and 30's. There has generally been scant research examining a narrower, emerging adult group, despite the importance of specifying age range when studying social identity (Smith & Silva, 2011).

Ethnic identity and perceived ethnic discrimination. With respect to the moderating role of various components of ethnic identity on the relation between perceived ethnic discrimination and depressive symptoms, studies have demonstrated buffering effects, exacerbating effects, and no effects. In a meta-analysis examining perceived ethnic discrimination and health, Pascoe and Richman (2009) found that, of the total number of studies ($k = 68$) examining the moderating role of ethnic identity on the relation between perceived ethnic discrimination and mental health, 18% reported a buffering effect, 12% reported an exacerbating effect, and 71% reported no effect.

Although meta-analytic studies are useful, this particular analysis ignored the multiple aspects of ethnic identity that must be considered. It is important to clarify under what conditions ethnic identity acts as a moderator, and whether these conditions may actually help detect findings in the 71% of studies reporting no effect. The below review will demonstrate that the specific type of ethnic identity component under investigation matters.

First, consistent with the meta-analytic results, it appears that ethnic identity may show no moderation effect when broad measures of ethnic identity are collapsed into one construct. Studies tend to indicate the absence of a moderating effect when ethnic identity is examined as an aggregate factor (i.e. different components of ethnic identity are collapsed into one variable). For example, in a sample of 309 Latino college students aged 18 to 29 from mixed generational status backgrounds, ethnic identity did not moderate the relation between various types of minority stressors and depressive symptoms (Arbona & Jimenez, 2014). Similarly, a study using an Asian sample of 91 college students aged 19 to 25 found that ethnic identity did not moderate the relation between perceived discrimination and depressive symptoms (Lee, 2003). Further, ethnic identity did not moderate the relation between discrimination and depressive symptoms in college students grouped by Asian, Black, and Latino backgrounds (Donovan et al., 2013). Thus, it may be important to separate out different components of ethnic identity in order to detect meaningful results.

On the other hand, some studies show that, when examined in isolation, positive ethnic-racial affect may serve to exacerbate the relation between perceived ethnic

discrimination and psychological adjustment. For example, in a group of 84 Korean college students aged 18 to 28 from mixed generation statuses, strong ethnic pride exacerbated the impact of discrimination on depressive symptoms (Yoo & Lee, 2005). A similar effect has been found for 128 Asian college students aged 18 to 29 from mixed countries of origin and generation statuses, where strong positive ethnic-racial affect was associated with greater negative affect when exposed to more racial discrimination (Yoo & Lee, 2009). In a sample of 643 Asian refugee adults aged 26 to 88 from mixed countries of origin, stronger ethnic salience intensified the relation between discrimination and depressive symptoms (Noh, Beiser, Kaspar, Hou, & Rummens, 1999). For 91 Asian adults aged 31 to 40 from mixed countries of origin and generational statuses, closeness to ethnic group exacerbated the impact of discrimination on psychological distress (Yip, Gee, & Takeuchi, 2008). Strong positive ethnic-racial affect in particular might put immigrant-origin college students at risk for increased depressive symptoms when faced with greater perceived ethnic discrimination.

Ethnic identity and acculturative stress. There is a paucity of literature examining the moderating impact of ethnic identity on the association between acculturative stress and depressive symptoms. Some studies have demonstrated a buffering impact of ethnic identity on the relation between general stressors and psychological adjustment (see Shelton et al., 2005). General stressors and acculturation stressors are distinct yet related such that they represent a form of daily hassles that may be normative at lower levels, but increase reactions to stress at higher levels (Berry, 2006). When faced with cultural hassles or stressors—especially at lower levels—

positive ethnic-racial affect may buffer the impact of acculturative stress on mental health (Shelton et al., 2005). This is different than what appears in some perceived ethnic discrimination literature, where ethnic identity exacerbates the impact of perceived ethnic discrimination stress on psychological adjustment. One reason for this may be because acculturative stress and perceived ethnic discrimination are inherently different stressor types. Acculturative stress involves challenging hassles, which may be normative at lower levels, whereas perceived ethnic discrimination is related to an oppressive form of stress that threatens one's sense of self and compromises one's sense of membership within a group; therefore, ethnic identity may play a differential role for each type of stressor.

Iturbide, Raffaelli and Carlo (2009) examined moderation analysis for Mexican-origin college students (one or both parents were from Mexico) aged 18-30 representing mixed generation statuses ($n = 148$). For each linear regression analysis, which was conducted separately by moderating variable (i.e. ethnic identity components were moderating variables: affirmation and belonging, achievement, and other-group orientation), each two-way interaction was not significant. It was only when a third variable (i.e. gender) was entered into the model when the authors discovered significant moderation results. Specifically, affirmation buffered the impact of acculturative stress on depressive symptoms at low levels of acculturative stress for females only. A similar pattern was found for other-group orientation for males only.

These authors acknowledged that Latinas tend to be more socialized to their ethnic group, and therefore the component of ethnic identity that reflects positive affect

about one's group may have a protective effect when faced with manageable acculturative stressors (Iturbide, Raffaelli, & Carlo, 2009), yet positive ethnic-racial affect may not be protective when cultural experiences become more stressful. That is, at lower levels of culture-related stressors—which are normative especially for foreign-born individuals—a sense of belonging may be protective, but these effects may diminish when faced with increased stressors. This study suggests the need to examine other variables that help explain the conditions under which ethnic identity moderates the relation between stress and adjustment, such as nativity or generation status, which was not clearly identified. This study also underscores the need to consider gender as a third-variable moderator.

In summary, the above review illustrates the need to specify particular components of ethnic identity under investigation. It also suggests that there may be unspecified conditions under which ethnic identity plays a moderating role. This review describes trends suggesting that positive ethnic-racial affect may exacerbate the impact of greater perceived ethnic discrimination stress on depressive symptoms but buffer the impact of less severe acculturative stress on depressive symptoms. For the other 71% of studies indicating no moderating effect (Pascoe & Richman, 2009), it is possible that there are other phenomena that explain these null findings, as suggested by Iturbide, Raffaelli and Carlo (2009). One reason for these mixed results may be because researchers have not specified certain conditions under which moderation occurs; that is, third-variable moderators have been unspecified.

Possible Moderators

Research has begun to identify third-variable moderators that may help explain the conditions under which positive ethnic-racial affect moderates (buffers or exacerbates) the relation between either perceived ethnic discrimination or acculturative stress and depressive symptoms. Certain factors may be related to ethnic identity and group differences that help explain the previously mentioned null results. One way to identify these factors is to reference a meta-analysis that identifies group differences important for the study of ethnic identity.

In a meta-analysis examining differences between studies inspecting the relation between ethnic identity and psychological well-being among non-White individuals in North America, Smith and Silva (2011) discovered stronger effects sizes in relatively younger samples (i.e. under age 40), and significant variation in effect sizes by acculturation level (i.e. larger effect for more acculturated individuals), design type (i.e. cross-sectional designs yielding larger effect sizes compared to longitudinal designs), and mental health outcome (i.e. depressive symptoms demonstrated larger effects compared to anxious symptoms). No differences in effect sizes were found for socioeconomic status, years of education, race or type of population sampled (e.g. individuals from the community versus students). Differences in gender were approaching statistical significance (Smith & Silva, 2011).

One reason the aforementioned studies reflect no results or mixed results may be because the statistical design did not allow for third-variable factors to freely vary. If these can be accounted for statistically, results may emerge. Two ways to do this include

controlling for certain covariates (such as age, design type, etc.) and attempting to detect differences in particular factors such as gender or the extent to which one has integrated the receiving culture, both of which were identified in Smith and Silva (2011) as influencing the relation between ethnic identity and psychological adjustment. In other words, these factors may account for differences in the way ethnic identity impacts the relation between cultural stressors and psychological adjustment.

Although nine studies to date have examined the impact of either perceived ethnic discrimination or acculturative stress on psychological distress using three-way interactions with immigrant-origin college students, the third-variable moderators are based in other theoretical foundations outside the scope of this study, such as coping behaviors (Brittian, Toomey, Gonzales, & Dumka, 2013; Heppner et al., 2014; Wei, Ku, Russell, Mallinckrodt, & Liao, 2008; Wei et al., 2012; Wei, Yeh, Chao, Carrera, & Su, 2013; Yoo & Lee, 2005). Generally, these studies demonstrate that third-variable moderators may help explain variation in the impact of ethnic identity on the cultural stress-psychological adjustment relation.

Two studies have examined a three-way interaction by means of moderated moderation with immigrant-origin college samples using the same variables as those in this dissertation. As discussed above, Iturbide, Raffaelli and Carlo (2009) examined whether gender moderated the moderating impact of positive ethnic-racial affect on the relation between acculturative stress and depressive symptoms (i.e. acculturative stress x positive ethnic-racial affect x gender). Another study tested whether generation status moderated the moderating impact of ethnic identity on the relation between perceived

ethnic discrimination and negative affect (perceived ethnic discrimination x ethnic identity x generation status; Yoo & Lee, 2009). These studies are discussed in subsequent sections.

By accounting for third variable influences, researchers have begun to make more nuanced conclusions about the role that ethnic identity plays on psychological adjustment when immigrant-origin college students are faced with cultural stressors. The current study focuses on three potential third-variable moderators for immigrant-origin college students: other-group orientation, nativity status, and gender.

Other-group orientation. Other-group orientation involves one's attitudinal orientation toward, and extent to which one interacts with, individuals from ethnic outgroups (Phinney, 1992). It accounts for both an inclination to develop relationships with individuals from ethnic groups other than one's own group, as well as actual behaviors and interactions with outgroup members. As discussed, acculturation involves the extent to which one is orientated toward the national or receiving culture, and the extent to which one maintains their heritage culture (Sam, 2006; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). While this bimodal model of acculturation offers a more nuanced understanding of acculturation compared to unidimensional models (that is, adoption of national culture necessarily implies loss of heritage culture; Cabassa, 2003), it does not account for adoption of culture from minority ethnic groups in multicultural communities with whom one may interact.

The extent to which one considers their multicultural context the *national culture* ultimately dictates how they report on their orientation toward this national culture. One

way to address this ambiguity is to assess one's attitudes and behaviors toward outgroup individuals more broadly. In turn, this accounts for one's symbolic other-group orientation (and interpersonal movement toward) other cultural groups, which includes both cultural majority groups and minority groups residing within the national culture. In this dissertation, this represents orientation and movement toward outgroup individuals living within a multicultural community in the Southeastern United States. This is similar to the "host" culture dimension of Berry's acculturation model (Berry, Phinney, Sam, & Vedder, 2006), which addresses how much one engages in practices, values, and identification of the receiving culture (Berry & Sabatier, 2011); however, it broadens this host culture notion to include multicultural individuals and groups living in the host society. In this way, it better captures one's orientation toward other ethnocultural groups.

Other-group orientation and perceived ethnic discrimination. Studies examining the moderating impact of ethnic identity on the relation between perceived ethnic discrimination and depressive symptoms may be assessing variability in components of ethnic identity without considering variation in other-group orientation, consequently jointly accounting for individuals who are more oriented toward other groups and those who are less oriented toward other groups. It might be that those who are oriented toward other groups are impacted more negatively by perceived ethnic discrimination, since they are met with unfair treatment by the individuals with whom they endeavor to connect. On the other hand, immigrant-origin college students with no preference toward developing relationships with outgroup members might be less

impacted by perceived ethnic discrimination if they do not strive for a sense of connectedness with these outgroup individuals (e.g. Derlan et al., 2014).

Banks and Kohn-Wood (2007) grouped 194 African American college students into four clusters based on attitudes toward national-culture and heritage-culture identifications. They discovered that the *integrationist* cluster—the cluster with the most propensity to blend with the mainstream culture—exhibited the strongest association between perceived ethnic discrimination and depressive symptoms compared to students in all other clusters. The authors concluded that students in the integrationist cluster are more strongly affected by perceived ethnic discrimination as a result of their desire to connect with other people compared to those who have no desire to develop these connections. Although this particular study examined ethnic minority and not immigrant-origin individuals, the results are relevant to this current study and can be taken into consideration given the empirical and conceptual overlap between racial and ethnic identity (Umaña-Taylor et al., 2014).

Further, for a sample of Turkish-origin and Moroccan-origin adults living in the Netherlands between ages 17 and 75, stronger identification with the national culture exacerbated negative effects of perceived ethnic discrimination on subjective well-being (Schaafsma, 2011). Although this national culture identification variable measured the extent to which someone felt attached to the majority culture (items included “Majority people understand me” and “I understand majority persons”), results indicate increased involvement in majority group relations may be related to psychological distress when majority group members treat minority group members unfairly (Schaafsma, 2011).

Taken together, positive ethnic-racial affect may exacerbate the impact of perceived ethnic discrimination on depressive symptoms when other-group orientation is higher, since perceived ethnic discrimination acts as both a personal threat to one's heritage group and also a threat to connecting with members of outgroups, which is ultimately most psychologically taxing. This hypothesis was supported in two aforementioned studies using different samples. This effect may not be demonstrated as strongly for individuals with low other-group orientation, or individuals with low positive ethnic-racial affect, since perceived ethnic discrimination may not pose such threats to one's social identity and desire for outgroup connectedness. Overall, a better understanding of the role of other-group orientation for positive ethnic-racial affect and perceived ethnic discrimination is needed (Lee, 2003; Lee 2005).

Other-group orientation and acculturative stress. For immigrant-origin college students, both a successful negotiation of the national society and stronger connectedness to one's heritage group appears to be related to better adjustment. In a group of 273 Asian American students aged 17 to 41 years from mixed countries of origin and nativity statuses, greater integration with mainstream culture was related to feeling connected to mainstream society, and greater enculturation to one's ethnic group was related to feeling connected to the ethnic community (Yoon, Hacker, Hewitt, Abrams, & Cleary, 2012). Also, connectedness to both communities was associated with positive adjustment. This effect was found even after accounting for cultural stressors such as perceived ethnic discrimination. This may be because these particular individuals are interpersonally effective across diverse groups of peers, even when faced with acculturative stressors.

In terms of studies examining acculturative stress, it appears that ethnic identity may buffer the impact of acculturative stress on depressive symptoms, but only at low levels of acculturative stress. For example, Iturbide, Raffaelli and Carlo (2009) concluded that orientation to the national culture may be beneficial when acculturative stress is low, which is based on the finding that, for college-aged Mexican origin men, high levels of other-group orientation were associated with greater self-esteem only at low levels of acculturative stress. The particular questionnaire they used to measure acculturative stress included perceived ethnic discrimination and other cultural stressors that were aggregated as a predictor variable. Although their sample size for males was relatively small ($n = 49$), these results suggest the importance of accounting for other-group orientation in explaining the experience of acculturation stressors, and other-group orientation may lose its effectiveness as a buffer at higher levels of cultural stressors.

Yakunina, Weigold, Weigold, Hercegovac, and Elsayed (2013) argued that openness to other cultures reduces international college students' experience of acculturative stress since these students are more open to diversity, have greater cross-cultural experiences, and may be better equipped to negotiate cultural conflicts. They found that, for an ethnically diverse group of 336 international students, openness to other cultures mitigates acculturation difficulties. Since stronger ethnic identity has been shown to moderate the association between general and acculturative stressors and depressive symptoms (Shelton et al., 2005), it may be that strong other-group orientation, in combination with a strong positive ethnic-racial affect, will further buffer the impact of acculturative stressors on depressive symptoms.

The current dissertation provides hypotheses about the conditions under which other-group orientation and ethnic identity are related to adjustment (Nguyen & Benet-Martínez, 2013; Rudmin, 2003; Rudmin, 2006). Given the aforementioned pattern of findings, this study predicts that strong positive ethnic-racial affect will exacerbate the relation between greater perceived ethnic discrimination and depressive symptoms at high levels of other-group orientation, while strong positive ethnic-racial affect will buffer the relation between acculturative stress and depressive symptoms at high levels of other-group orientation.

Nativity status. Despite recent attention on grouping participants by generation and nativity status, many studies examining the impact of cultural stressors and ethnic identity on adjustment still merge individuals into one group (e.g. Polanco-Roman & Miranda, 2013). This may partially account for mixed or null findings with respect to the role of ethnic identity on the relation between cultural stress and depressive symptoms. Findings may be revealed, though, when this interaction is separated by generation status.

Nativity status separates immigrant-origin individuals who are foreign-born and those who are U.S.-born. Another way to group individuals is by age of arrival into the U.S. (Rumbaut, 2004). The extent to which generation groupings vary with respect to different outcomes is an open empirical question (García Coll & Marks, 2011; Rumbaut, 2004; Teruya & Bazargan-Hejazi, 2013). Distinguishing between grouping statuses allows for the detection of possible group-level differences, but each grouping methodology is not without limitations. For example, age of arrival into the U.S. does not account for individuals who have left and re-entered the country or for differences in

political/legal status, and nativity status may not account for differences in receiving culture language competency. Although this specific question has not been tested, a few lines of research support the notion that ethnic identity may operate differentially by nativity status (i.e. U.S.-born versus foreign-born individuals).

The immigrant paradox involves the notion that foreign-born migrants tend to demonstrate better mental health adjustment outcomes compared to their U.S.-born, immigrant-origin counterparts (Berry, Phinney, Sam, & Vedder, 2006; García Coll & Marks, 2011; Salas-Wright, Kagotho, & Vaughn, 2014). Better mental outcomes have been detected with respect to depressive disorders in first generation (compared to second generation) immigrants from Asian, African, and Latin American backgrounds (Salas-Wright et al., 2014; Tillman & Weiss, 2009). One study examining over 500 Hispanic young adults discovered foreign-born women reported less depressive symptoms compared to U.S.-born women (Tillman & Weiss, 2009), consistent with the immigrant paradox. In this study, foreign-born women experienced a drop in depressive symptoms over time compared to U.S.-born women, regardless of age of arrival into the United States. The authors concluded that the impact of acculturation factors on depression outcomes depended more on generation status than on time spent in the United States.

Additionally, foreign-born immigrants tend to report a stronger sense of ethnic identity compared to U.S.-born immigrant-origin adults (e.g. Ahmed, Kia-Keating, & Tsai, 2011; Yip et al., 2008). U.S.-born immigrant-origin individuals tend to use hyphenated ethnic identity labels (e.g. “Asian-American”) more often than foreign-born immigrants in both adolescent (Fuligni, Witkow, & Garcia, 2005; Rumbaut 1994) and

adult (Rumbaut, 2004) samples. These results suggest that nativity status may play a role in how someone experiences positive ethnic-racial affect, which may account for differences in how cultural stressors impact adjustment between foreign-born and U.S.-born immigrant-origin individuals.

Another component of nativity status difference involves immigrant optimism. This term typically refers to a stronger tendency for foreign-born individuals, mainly by foreign-born parents, to promote academic achievement and occupational attainment (Kao & Tienda, 1995). It may also include stronger feelings of optimism resulting from the belief that migration has improved their standards of living (Cervantes, Padilla, Napper, & Goldbach, 2013; Rogler, Cortes, & Malgady, 1991). Foreign-born individuals may have feelings of optimism that are rooted within a desire for a new life in the United States (Cervantes et al., 2013), suggesting potential differences in expectations of U.S. American society and how individuals differentially perceive culture-related stressors compared to those born in the United States.

Nativity status and perceived ethnic discrimination. Compared to U.S.-born immigrant-origin individuals, more perceived ethnic discrimination has been reported by foreign-born Asian adults (Ying, Lee, & Tsai, 2000; Yip et al., 2008; Yoo, Steger, & Lee, 2010) and foreign-born mixed Asian and Latino samples (Sodowsky, Lai, & Plake, 1991). In contrast, compared to foreign-born individuals, some studies found that more perceived ethnic discrimination is reported by U.S.-born immigrant-origin Latino adults (Pérez et al., 2008), Black adults (Donovan et al., 2013; Henning-Smith, Shippee, McAlpine, Hardeman, & Farah, 2013), and Middle Eastern adults (Gaudet, Clément, &

Deuzeman, 2005). Mixed results necessitate the need to better understand of how perceived ethnic discrimination differs by nativity status.

It has been hypothesized that nativity status moderates the relation between perceived ethnic discrimination and depressive symptoms, since mere exposure to the U.S. cultural milieu may make one more susceptible to both mental health problems and societal-based adversities such as perceived ethnic discrimination (Chithambo, Huey, & Cespedes-Knadle, 2014). This has been found for a sample of U.S.-born Mexican adults exhibiting a stronger perceived ethnic discrimination-depressive symptoms relation compared to foreign-born counterparts (Finch, Kolody, & Vega, 2000). Additionally, in a study of Asian American college students (Yoo & Lee, 2009), negative affect was regressed onto a three-way interaction: imagined ethnic discrimination x ethnic identity x nativity status. Stronger ethnic identity was associated with greater negative affect at higher levels of imagined ethnic discrimination for U.S.-born college students but not immigrant-origin college students. U.S.-born immigrant-origin adults may be at greater risk for greater depressive symptoms when faced with perceived ethnic discrimination.

One study examined the moderating effects of nativity status and ethnic identity on the relation between perceived ethnic discrimination and depressive symptoms in a group of 95 adolescents from mixed ethnic backgrounds and nativity statuses (Tummala-Narra & Claudius, 2013). The authors found that nativity status moderated the impact of perceived ethnic discrimination on depressive symptoms such that there was a positive association between perceived ethnic discrimination and depressive symptoms for U.S.-born adolescents at low to average levels of ethnic identity. They concluded that,

consistent with the immigrant paradox and rejection sensitivity theory, perceived ethnic discrimination may have more detrimental effects for U.S.-born immigrant-origin adolescents, since unfair treatment by members of a society into which they were born may be perceived as social rejection. This is in contrast to foreign-born individuals, who have less experience with the racial hierarchy and social dynamics in the United States, and may therefore be less influenced by perceived ethnic discrimination (Tummala-Narra & Claudius, 2013).

Donovan et al. (2013) examined the impact of perceived ethnic discrimination and ethnic identity on depressive symptoms by generation status and ethnocultural group, and found no significant findings. As with many of the aforementioned studies, they used a composite ethnic identity score (achievement as well as belonging and affirmation), which may have confounded their results. These authors suggested the need for more research examining moderating factors on the relation between perceived ethnic discrimination and depressive symptoms, especially that of ethnic identity, with consideration for generation status.

Nativity status and acculturative stress. Although there is a scarcity of literature examining how the interplay of acculturative stress and sociocultural identity differentially impacts depressive symptoms by nativity status for emerging adults, one study examined the impact of cultural stressors on psychological adjustment for Asian-origin adults (Miller, Yang, Farrell, & Lin, 2011). In this study, bicultural self-efficacy was more important for U.S.-born than foreign-born adults. Specifically, stronger bicultural self-efficacy buffered the impact of acculturative stress on negative adjustment.

These results suggest that, when faced with cultural stressors, ethnic identity may play a stronger role for U.S.-born adults, and a stronger sociocultural identity may buffer the effects of acculturative stress on psychological adjustment.

Given that nativity differences have been demonstrated for the impact of ethnic identity on the perceived ethnic discrimination-psychological adjustment association, the moderating impact of ethnic identity on this relation may also vary by nativity status. Although there is substantial work to be done to disentangle the differential impact of perceived ethnic discrimination on depressive symptoms by generation status, and the impact of ethnic identity on this relation, it appears there may be differences for U.S.-born and foreign-born individuals with respect to perceived ethnic discrimination, mental health outcomes, and ethnic identity.

Based on these patterns of differences, the current study hypothesizes that stronger positive ethnic-racial affect will exacerbate the impact of perceived ethnic discrimination on depressive symptoms for U.S.-born college students only. For foreign-born individuals, no interaction effect is predicted, since they tend to have less experience with the racial and oppressive hierarchies of the United States (Tummala-Narra & Claudius, 2013). This study additionally hypothesizes that stronger sense of positive ethnic-racial affect will buffer the relation between acculturative stress and depressive symptoms for U.S.-born individuals only, since sociocultural identity may be more important for this group when faced with cultural stressors (Miller et al., 2011).

Gender. Although perceived ethnic discrimination and acculturative stressors tend to be related to poorer mental health outcomes for males and females, the impact of

certain components of ethnic identity on this relation may vary by gender (Castillo et al., 2015). Specifically, there may be differences in the way that ethnic identity impacts psychological adjustment (Pascoe & Richman, 2009; Smith & Silva, 2011). The below review will illustrate that internalizing symptomology appears to be a more relevant outcome for female college students (Rosenthal & Schreiner, 2000), and the components of positive ethnic-racial affect and socialized gender roles may be more salient for women (Berry, 2007).

Gender differences in the experience of stress (Kiang et al., 2006) and perceived ethnic discrimination have been detected early in development for minority and immigrant-origin youth, especially with respect to the impact of perceived ethnic discrimination on mental health, health behaviors, and academic outcomes (e.g. Brodish et al., 2011; Brown, Alabi, Huynh, & Masten, 2011; Chavous, Rivas-Drake, Smalls, Griffin, & Cogburn, 2008; Zeiders, Umaña-Taylor, & Derlan, 2013). In adulthood, some studies show that men are more likely to report perceived ethnic discrimination (Ayalon, 2014), while others demonstrate more perceived ethnic discrimination for women (Dambrun, 2007). Regardless of the amount of perceived ethnic discrimination experienced, there appears to be trends for the link between perceived ethnic discrimination and psychological adjustment: while men tend to endorse externalizing problems and substance use such as drug and alcohol abuse (Ornelas & Hong, 2012) as well as tobacco use (Wiehe, Aalsma, Liu, & Fortenberry, 2010), perceived ethnic discrimination may have a stronger impact on internalizing symptoms for females (Dambrun, 2007; D'Anna, Ponce, & Siegel, 2010; Takeuchi et al., 2007).

Early gender socialization is different for males and females such that family cultural socialization may be more pronounced for females across cultures (Juang & Syed, 2010). Males are encouraged to strive for autonomy and independence, whereas females are often encouraged to develop stronger social relatedness (Robinson & Biringen, 1995), especially within heritage groups. Women tend to endorse components of ethnic identity more strongly than men (Dion & Dion, 2004), and women in more collectivist cultures than the U.S. such as Latina and Asian women (Hofstede, 2014) often have pressure to maintain cultural heritage, remain close to family members, and turn to family for support (Castillo et al., 2015; Fu, Shen, & Marquez, 2014; Umaña-Taylor, Wong, Gonzales, & Dumka, 2012). While positive ethnic-racial affect is important for women, it appears that biculturalism may be a more important factor for men, who tend to be socialized to develop more autonomy (Castillo et al., 2015; Fu et al., 2014; Iturbide, Raffaelli, & Carlo, 2009). One meta-analysis found that women from diverse cultural backgrounds endorsed higher enculturation levels, and endorsed a stronger relation between enculturation and positive psychological adjustment compared to men, which may be related to gender role expectations around maintaining strong familial and community relations (Yoon et al., 2013).

Iturbide, Raffaelli and Carlo (2009) found differential moderating effects on the association between acculturative stress and depressive symptoms by different components of ethnic identity. They demonstrated that ethnic group affirmation/belonging and ethnic achievement (separately) buffered the association between acculturative stress and depressive symptoms for women at low levels of

acculturative stress. They concluded that women may benefit more from being oriented to their heritage culture at lower levels of acculturative stress, which they purported is rooted in different socialization processes for Mexican-origin men and women. Women are encouraged to foster ingroup connectedness, whereas men are encouraged to develop independence and autonomy consistent with western cultural values (Padilla, 2006; Robinson & Biringen, 1995). These socialization patterns have been found to occur even early on in development for a multicultural, albeit predominately White, sample (Fiese & Skillman, 2000). Greater levels of cultural stressors, especially perceived ethnic discrimination, may be more socially threatening and deleterious for women with stronger positive ethnic-racial affect compared to men.

Rodriguez, Myers, Morris, & Cardoza (2000) regressed psychological distress on a number of stress types for Latino college students from various countries of origin and mixed generation statuses. They found that acculturative stress was positively associated with psychological distress above and beyond the effect of other stressors, which is consistent with other studies of multiethnic samples on predominately white campuses (e.g. Wei et al., 2010). They also found that background characteristics such as gender explained more variance in psychological well-being than did cultural stressors. The authors suggested exploring nuances in gender differences to better understand differential contributions to psychological adjustment.

There is sufficient data to suggest that gender differences may be due to socialization, amount and type of perceived ethnic discrimination, and ways of responding to perceived ethnic discrimination that are considered acceptable for men

versus women (Brodish et al., 2011). This might also be attributed to differences in the impact of acculturation experiences on mental health (Castillo et al., 2015). Ultimately, more research examining differences by gender for cultural stressors and psychological adjustment is needed (Yoon et al., 2013). Given the salience of positive ethnic-racial affect and the importance of perceived ethnic discrimination for social identity and sense of group relatedness among women, this study hypothesizes that strong positive ethnic-racial affect will exacerbate the impact of perceived ethnic discrimination on depressive symptoms for females but not males. On the other hand, positive ethnic-racial affect will have protective effect for females but not males on the relation between acculturative stress and depressive symptoms.

Current Study and Hypotheses

Based on the pattern of findings in the literature, this study makes specific hypotheses for a multiethnic sample of immigrant-origin ethnic minority college students (see Figure 1 for the general conceptual model). Consistent with rejection sensitivity theory, positive ethnic-racial affect will increase risk for depressive symptoms under the following conditions.

Hypothesis 1: For emerging adults who endorse higher levels of other-group orientation, the relation between perceived ethnic discrimination stress and depressive symptoms will be exacerbated by stronger positive ethnic-racial affect. For those with lower levels of other-group orientation, greater perceived ethnic discrimination stress will be related to more depressive symptoms regardless of strength of positive ethnic-racial affect.

Hypothesis 2: For U.S.-born emerging adult students, the relation between perceived ethnic discrimination stress and depressive symptoms will be exacerbated by stronger positive ethnic-racial affect. For foreign-born students, greater perceived ethnic discrimination stress will be related to more depressive symptoms regardless of strength of positive ethnic-racial affect.

Hypothesis 3: For females, the relation between perceived ethnic discrimination stress and depressive symptoms will be exacerbated by stronger positive ethnic-racial affect. For males, greater perceived ethnic discrimination stress will be related to more depressive symptoms regardless of strength of positive ethnic-racial affect.

Consistent with social identity theory, positive ethnic-racial affect will decrease risk for depressive symptoms under the following conditions.

Hypothesis 4: For emerging adults who endorse higher levels of other-group orientation, the relation between acculturative stress and depressive symptoms will be attenuated by stronger positive ethnic-racial affect. For those with lower levels of other-group orientation, greater acculturative stress will be related to greater depressive symptoms regardless of strength of positive ethnic-racial affect.

Hypothesis 5: For U.S.-born emerging adults, the relation between acculturative stress and depressive symptoms will be attenuated by stronger positive ethnic-racial affect. For foreign-born emerging adults, greater acculturative stress will be related to greater depressive symptoms regardless of strength of positive ethnic-racial affect.

Hypothesis 6: For emerging adult females, the relation between acculturative stress and depressive symptoms will be attenuated by stronger positive ethnic-racial

affect. For emerging adult males, greater acculturative stress will be related to greater depressive symptoms regardless of strength of positive ethnic-racial affect.

CHAPTER II

METHODS

Procedure

Immigrant-origin first- and second-generation ethnic minority college students ($n = 290$) enrolled in an introductory psychology course at a large public university in the Southeastern United States completed self-report questionnaires as part of a mass screening mechanism. Students received course credit for completing the measures. In order to participate in the study, either the student and/or one of the students' parents must have been born outside of the United States, which students indicated on the demographic portion of the questionnaires. Students who met these inclusion criteria were routed to particular questionnaires for this study. All participants completed the questionnaires in the same order: informed consent, demographic questions, Beck Depression Inventory, Multigroup Ethnic Identity Measure, and the Societal, Attitudinal, Familial, and Environmental acculturative stress scale. Data was collected across five semesters from 2012-2014 using Qualtrics, an electronic research software. Students independently completed questionnaires online from any accessible computer prior to the end of the semester. This study was approved by the local Institutional Review Board.

Participants

Consistent with Arnett (2000), emerging adult participants ($n = 290$) ranged in age from 18-25 ($M = 18.87$, $SD = 1.32$) and included freshmen (69%), sophomores

(22%), juniors (6%), and seniors (3%). Two students did not report their grade level.

Approximately 71% were female, and 64% were born in the United States. An ordinal variable was used for length of time lived in the United States: more than 10 years/entire life (75%), between 5-10 years (10%), 3-5 years (2%), 1-3 years (7%), and less than one year (7%). Students reported ethnic identities representing Asian (36%), Latino (24%), Black (15%), Middle Eastern (5%), and Multiethnic (20%) backgrounds. Students were categorized as multiethnic if they reported that their parents were from different ethnic backgrounds (see Table 1 for further description of the multiethnic group).

Measures

Demographic variables. Information was collected for age, gender, ethnic background, year in college, nativity, parents' nativity, and length of time lived in US.

Acculturative stress. Subjective impact of acculturative stress was measured using items from the Societal, Attitudinal, Familial, and Environmental acculturative stress scale (SAFE; Chavez, Moran, Reid, & Lopez, 1997; Mena, Padilla, & Maldonado, 1987; see Appendix C for items and response options). Numerous versions of the SAFE have been adapted and used to examine acculturative stress in youth and adults from African, Asian, Latin American, and Middle Eastern backgrounds. The version used for the current study was designed for youth in an academic setting and includes a range of acculturation stressors. This particular version was chosen because the items were designed for use in an academic context, and they measure attributions of stress rather than mere presence of stressors. Also, the language of each item had been slightly modified from the original version to make it clearer and more linguistically accessible

(Chavez et al., 1997), yet the subject matter remained identical to the original version. Participants respond to each item using a Likert scale. This version has been used in youth and young adults up to age 20 (e.g. Alvarado & Ricard, 2013). Because the factor structure of this particular version is not well established with college students, theoretically-driven and empirically-derived (i.e. confirmatory factor analysis, described below) approaches were used to identify which items loaded onto the acculturative stress latent factor. These self-report items used a Likert scale to measure the extent to which a particular acculturative stressor is bothersome. Cronbach's alpha for the final six items for the current study was .80.

Perceived ethnic discrimination stress. Select items from the aforementioned Societal, Attitudinal, Familial, and Environmental acculturative stress scale (SAFE; Chavez et al., 1997; Mena et al., 1987) designed for youth in academic settings was used to assess for the impact of perceived ethnic discrimination stressors (see Appendix C). The self-report discrimination items use a Likert scale response style to indicate the extent to which a particular ethnic discrimination stressor is bothersome. Since the factor structure of this questionnaire is not well known with emerging adults, theoretically-driven and empirically-derived (i.e. confirmatory factor analysis) approaches were used to identify which items loaded onto the discrimination stress latent factor, described later. Cronbach's alpha for the final six items in the current study was .68.

Positive ethnic-racial affect (PERA). The 5-item Affirmation and Belonging subscale of the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) was used to assess for positive ethnic-racial affect (see Appendix C). This particular subscale

assesses for the extent to which one endorses feelings of belonging and attachment about one's ethnic group, as well as a sense of ethnic pride, feeling good, and being happy about one's group membership (Phinney, 1992). The MEIM is the most widely used measure of ethnic identity in studies examining ethnic identity and psychological well-being across ethnoculturally and generationally diverse samples of youth and adults (Smith & Silva, 2011), and it is especially useful in measuring positive ethnic-racial affect (Rivas-Drake, Syed et al., 2014). The measure was designed for use across ethnically diverse groups, and it is grounded in the notion of ethnic identity as it pertains to social identity theory (Phinney, 1992; Tajfel & Turner, 2004). The Cronbach's alpha for the current study was .84.

Other-group orientation (OGO). The 6-item Other-Group Orientation subscale of the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) was used (see Appendix C). This subscale assesses orientation and attitudes toward ethnocultural groups other than one's own (Phinney, 1992). Studies have demonstrated that this subscale is distinct from other components of ethnic identity (e.g. Avery, Tonidandel, Thomas, Johnson, & Mack, 2007; Ponterotto, Gretchen, Utsey, Stracuzzi, & Saya, 2003; Worrell, 2000). The Cronbach's alpha for the current study was .71.

Depressive symptoms. A total score using the 21-item Beck Depression Inventory (BDI) was used to assess for depressive symptoms (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961; see Appendix C). The BDI is one of the most commonly used measures of depressive symptoms with diverse college samples, and it has been used with adults from a variety of cultural backgrounds (e.g. Ibrahim et al., 2013; Reyes-Rodríguez,

Rivera-Medina, Cámara-Fuentes, Suárez-Torres, & Bernal, 2013). This measure has demonstrated good psychometric properties with respect to reliability, validity, and cultural equivalence (e.g. Contreras, Fernandez, Malcarne, Ingram, & Vaccarino, 2004). For the sample in the current study, Cronbach's alpha was .90.

CHAPTER III

RESULTS

Preliminary Analyses

Confirmatory factor analysis. Items from the SAFE that were theoretically indicative of perceived ethnic discrimination stress and acculturative stress were first identified. Next, a confirmatory factor analysis (CFA) using these items was conducted using LISREL version 8.80 to verify a two-factor structure. The standard SEM N:q rule was used (Kline, 2011), where N represents the number of cases, and q represents the model parameters that require statistical estimates, with a ratio of 10:1. As such, sufficient sample size for the CFA was 140.

Unit loading identification, the most common constraint approach (Kline, 2011), was used to identify the model whereby factor loadings for SAFE items 12 and 28 were fixed to 1.0 for the ethnic discrimination and acculturative stress latent variables, respectively. Initial results from the CFA included modification indices that suggested questionable factor loadings for two items that were vaguely worded: *It bothers me that people in my family who I am close to don't understand the things that I think are important, that are new to them*; and *People think badly of me if I practice customs or I do the "special things" of my group*. In accordance with the modification indices, a two-factor CFA was repeated with these two items removed.

Four fit indices (see Table 2) were used to evaluate the fit of the hypothesized model to the observed data. First, the model chi square (χ^2) is a fundamental fit index whereby failure to reject the null hypothesis indicates support for the proposed model. The chi square test was significant ($\chi^2=173.90$, $df = 53$, $p < .001$); however, because the chi square test is sensitive to sample size, it may lead to erroneous results with larger samples. Therefore, it was necessary to examine other fit indices.

Three fit indices that are less sensitive to sample size were used. The standardized root mean square residual (SRMR) is a measure of the mean absolute correlation residual and reflects the overall differences between the observed and predicted correlations, where values less than .080 are considered favorable. For the model, the average correlation residual of .072 is less than .080, which indicates satisfactory fit. Next, the root mean square error of approximation (RMSEA) estimates the quantity of error of approximation per model degree of freedom, and ultimately supports models that are more parsimonious. Values above .100 suggest poor fit. For this model, the RMSEA value of .089 (90% CI: .074 - .100) falls within the reasonable fit range. Finally, the CFI index compares the research model to a null model assuming zero population covariance among observed variables. The CFI index ranges from 0-1, with higher scores suggesting better fit. A CFI value greater than .90 typically indicates reasonably good fit. The model value of .93 suggests reasonably good fit and an improvement over the null model. Taken together, fit indices suggest acceptable model fit. All factor loadings were statistically significant ($p < .05$). The covariance of the latent variables was statistically significant, as expected (standardized covariance: $r = .57$,

$p < .05$), but was below the cutoff of both .85 (Kenny, 2012) and the more conservative .70, suggesting discriminant validity and suitable distinctiveness between the two latent factors. The CFA model with standardized loadings is presented in Figure 2.

Diagnostics. According to a Kolmogorov-Smirnov test for normality (Goodman, 1954), the dependent variable (i.e. depressive symptoms) was non-normally distributed and positively (right) skewed; therefore, a \log_{10} transformation of this variable was used for regression analyses, which can be used to reduce right skewness (Baum, Connolly, & O'Connor, 2014; Box & Cox, 1964). One-way ANOVAs and Tukey post-hoc analyses tested for within-group mean depressive symptom differences for ethnic identity, year in college, length of time in the U.S., and semester during which data was collected. No differences in depressive symptoms were found within categories for any of these groups. Accordingly, these variables were not included in regression analyses as covariates. Further, no notable outliers were present for any of the independent variables, and no quadratic relations appeared in a matrix scatter.

Pearson correlations. There was a small, positive linear relation between depressive symptoms and age ($r = .16, p < .01$), and between depressive symptoms and acculturative stress ($r = .15, p < .01$; see Table 3). Depressive symptoms were relatively more strongly (and positively) associated with perceived ethnic discrimination stress ($r = .29, p < .001$), suggesting that increases in culture-related stress were generally associated with increased depressive symptoms. Additionally, depressive symptoms were inversely related to positive ethnic-racial affect ($r = -.22, p < .001$), such that stronger positive ethnic-racial affect was associated with less depressive symptoms.

Other-group orientation was positively associated with positive ethnic-racial affect ($r = .22, p < .001$). Other-group orientation was also associated with length of time in the U.S. ($r = .13, p < .05$), suggesting those who spend more time in the U.S. may develop a greater sense of connectedness with members of ethnic outgroups. Additionally, being female was slightly more associated with greater positive ethnic-racial affect ($r = -.12, p < .05$), which is consistent with literature asserting that ethnic identity may be more salient for young adult females (Brodish et al., 2011; Castillo et al., 2015).

Expectedly, acculturative stress was positively associated with perceived ethnic discrimination stress ($r = .46, p < .001$). Acculturative stress was also positively associated with age ($r = .19, p < .001$), yet inversely associated with other-group orientation ($r = -.25, p < .001$), demonstrating that less acculturative stress was somewhat related to a stronger sense of connectedness to ethnic outgroups. Finally, greater acculturative stress was associated with being foreign-born ($r = -.49, p < .001$) and less time in the United States ($r = -.42, p < .001$).

Primary Analyses

In order to determine sufficient sample size and statistical power for regression analyses with three-way interactions, the interaction terms themselves can be considered predictor variables, or, given the inherent similarity between linear regression and ANOVA analyses, sample sizes necessary for ANOVAs can be considered. G*Power version 3.1.9.2 (Faul, Erdfelder, Buchner, & Lang, 2009; Faul, Erdfelder, Lang, & Buchner, 2007) was used to determine the following sample sizes, given $\alpha = .05$ and

power $(1 - \beta) = .80$, with a small to medium effect size ($f^2 = .175$). For linear regression analyses where interaction terms are considered separate predictor variables, required sample size was approximately 113; for ANOVA analyses, required sample size was 259.

Linear regressions using three-way interactions were used to examine whether the relation between cultural stressors and depressive symptoms were moderated by positive ethnic-racial affect, contingent on other-group orientation, nativity, and gender. Separate analyses for the third-variable moderators (i.e. other-group orientation, nativity, and gender) were conducted for each cultural stressor (i.e. perceived ethnic discrimination stress and acculturative stress) using model 3 (Hayes, 2013a) of the PROCESS macro (Hayes, 2013b) in SPSS version 20, resulting in a total of six distinct analyses. Age was included as a covariate in each regression analysis since it was linearly associated with depressive symptoms.

In regression analyses examining perceived ethnic discrimination stress as a predictor variable, acculturative stress served as a covariate; in regression analyses examining acculturative stress as a predictor variable, perceived ethnic discrimination served as a covariate. This allowed for a more nuanced interpretation of results, since inclusion of both cultural stressors permits examination of the impact of one particular cultural stressor on depressive symptoms above and beyond the impact of the other cultural stressor in the model. Positive ethnic-racial affect was included as a moderator in each analysis. All independent variables were mean-centered except for the dichotomous variables (i.e. nativity and gender; Hayes, 2013b) and the dependent variable, which was \log_{10} transformed as previously described.

The below results describe the outcomes of each analysis with respect to (a) simple slopes, and (b) slope differences. Simple slopes tested for whether a given slope differs significantly from zero (Sibley, 2008). Slope difference tests are unique to three-way interactions and tested for whether slopes differ between groups; when a three-way interaction was statistically significant, slope difference tests examined whether and/or which specific slopes differ (Sibley, 2008). These were depicted graphically in Figure 3. Unstandardized coefficients (Hayes, 2013b) for the final model of each of the six regression analyses are presented in Table 4 and Table 5. For clarity purposes, and consistent with hypotheses, each final analysis was labeled as a separate model; therefore, Models 1 through 6 represent each of the six analyses and correspond to Hypotheses 1 through 6.

Model 1: Perceived ethnic discrimination stress x positive ethnic-racial affect x other-group orientation. This model accounted for 20% of the variance in depressive symptoms ($p < .001$). The three-way interaction was statistically significant (unstandardized coefficient = $-.05$, $p < .05$), and accounted for 2% of the variance in depressive symptoms above and beyond the independent variables and two-way interactions in the model (see Table 4).

Simple slope tests revealed that all slopes differed significantly from zero. For all slopes, depressive symptoms increased as perceived ethnic discrimination stress increased (see Figure 3). That is, the impact of perceived ethnic discrimination stress on depressive symptoms was in the positive direction and significant across all levels of positive ethnic-racial affect and other-group orientation. Broadly speaking, perceived

ethnic discrimination stress was deleterious for this sample regardless of strength of other-group orientation or positive ethnic-racial affect.

Although the three-way interaction was statistically significant, suggesting the interaction between perceived ethnic discrimination stress and positive ethnic-racial affect varies across levels of other-group orientation, Johnson-Neyman (Hayes, 2013b) significance regions indicate that differential effect sizes for the three-way interaction only occurred at extreme levels of other-group orientation and beyond the region of -1 SD to +1 SD from the mean, which explains the presence of a statistically significant interaction yet no statistically significant slope differences as depicted in Figure 3.

The statistically significant two-way interaction between positive ethnic-racial affect and other-group orientation demonstrates that stronger levels of positive ethnic-racial affect tend to be protective against depressive symptoms when immigrant-origin emerging adults in this sample are faced with ethnic discrimination-related stressors (Figure 3). This is further corroborated by the effect between positive ethnic-racial affect and depressive symptoms in the final model, indicating an inverse relation such that stronger positive ethnic-racial affect is significantly associated with less depressive symptoms, which is more consistent with social identity theory than rejection sensitivity theory.

Model 2: Perceived ethnic discrimination stress x positive ethnic-racial affect x nativity. This model accounted for 18% of the variance in depressive symptoms ($p < .001$). Inconsistent with hypotheses, the three-way interaction was not statistically significant ($p > .10$). None of the two-way interactions were significant (see Table 4).

Model 3: Perceived ethnic discrimination stress x positive ethnic-racial affect x gender. This model accounted for 20% of the variance in depressive symptoms ($p < .001$). The three-way interaction was statistically significant (unstandardized coefficient = .07, $p < .01$), and accounted for 2% of the variance in depressive symptoms above and beyond the independent variables and two-way interactions in the model (see Table 4).

Simple slope tests indicated that three slopes differed statistically significantly from zero: emerging adult females with low positive ethnic-racial affect ($p < .001$), females with high positive ethnic-racial affect ($p < .001$), and males with high positive ethnic-racial affect ($p < .01$; see Figure 3). For these slopes, depressive symptoms increased as perceived ethnic discrimination stress increased, and the impact of perceived ethnic discrimination stress on depressive symptoms was positive and significant for females across all levels of positive ethnic-racial affect, and for males with high positive ethnic-racial affect. The slope for males with low positive ethnic-racial affect did not significantly differ from zero.

The effect sizes between females (but not between males) were significantly different across levels of positive ethnic-racial affect (see Table 5). Specifically, there was a significantly stronger positive association (i.e. a significant slope difference) between perceived ethnic discrimination stress and depressive symptoms for females with a weaker sense of positive ethnic-racial affect than those with a stronger sense of positive ethnic-racial affect ($p < .05$; Figure 3; Table 6). Additionally, with respect to cross-gender differences, females with weaker positive ethnic-racial affect demonstrated a stronger positive association between perceived ethnic discrimination stress and

depressive symptoms than males with weaker positive ethnic-racial affect ($p < .01$; Figure 3). The relation between perceived ethnic discrimination stress and depressive symptoms did not significantly vary across levels of positive ethnic-racial affect between males.

Consistent with hypotheses, gender did in fact moderate the impact of positive ethnic-racial affect on the relation between perceived ethnic discrimination stress and depressive symptoms, with significant effects shown for females but not males.

Inconsistent with hypotheses and the rejection-sensitivity theory, females with a strong positive ethnic-racial affect did not demonstrate an exacerbating effect. Instead, and more consistent with social identity theory, an exacerbating effect was found for females with a weaker sense of positive ethnic-racial affect.

Model 4: Acculturative stress x positive ethnic-racial affect x other-group orientation. This model accounted for 21% of the variance in depressive symptoms ($p < .001$). The three-way interaction was statistically significant (unstandardized coefficient = $-.06$, $p < .05$), and accounted for 2% of the variance in depressive symptoms above and beyond the independent variables and two-way interactions in the model (see Table 7).

Simple-slope tests demonstrated an effect nearing statistical significance ($p = .09$) such that an increase in acculturative stress was nearly associated with greater depressive symptoms for emerging adults reporting weaker positive-ethnic racial affect and stronger other-group orientation. No other slopes were statistically significantly different from zero.

There was a statistically significant slope difference between emerging adults reporting weaker positive-ethnic racial affect/weaker other-group orientation, and those reporting weaker positive-ethnic racial affect/stronger other-group orientation ($p < .01$; Figure 3) such that those with stronger other-group orientation reported a stronger positive association between acculturative stress and depressive symptoms. There were no other significant slope differences.

Johnson-Neyman significance regions (Hayes, 2013b) demonstrated that the impact of the acculturative stress x positive ethnic-racial affect interaction on depressive symptoms significantly varies ($p < .05$) only at extremely low levels of other-group orientation (i.e. values beyond $-.73$, which falls between -1 SD and -2 SD from the other-group orientation mean). These effect size differences would be illustrated in Figure 3 if the non-parallel, converging lines (representing weaker other-group orientation) extended beyond the -1 SD and $+1$ SD region.

Consistent with hypotheses, other-group orientation did in fact moderate the impact of positive ethnic-racial affect on the relation between acculturative stress and depressive symptoms, albeit in a different manner than what was predicted. Somewhat consistent with Hypothesis 4, Figure 3 illustrates a trend-level effect such that stronger positive ethnic-racial affect appeared to nearly attenuate the relation between acculturative stress and depressive symptoms for students with higher other-group orientation compared to students with weaker other-group orientation. This again demonstrates support for social identity theory and further illustrates that the impact of cultural stressors on depressive symptoms may depend on the influence of varied levels

of both positive ethnic-racial affect and other-group orientation for immigrant-origin emerging adults.

Model 5: Acculturative stress x positive ethnic-racial affect x nativity. This model accounted for 19% of the variance in depressive symptoms ($p < .001$). Inconsistent with hypotheses, the three-way interaction was not statistically significant ($p = .09$). None of the two-way interactions were statistically significant (see Table 7).

Model 6: Acculturative stress x positive ethnic-racial affect x gender. This model accounted for 18% of the variance in depressive symptoms ($p < .001$). Inconsistent with hypotheses, the three-way interaction was not statistically significant ($p = .09$). None of the two-way interactions were statistically significant (see Table 7).

CHAPTER IV

DISCUSSION

Immigrant-origin emerging adult students on college campuses in the United States face unique acculturation challenges resulting from attempts at navigating two or more cultures, and these challenges are often associated with negative mental health outcomes (Berry, 2006). Depressive symptoms have been shown to be higher among college students relative to the general population (Ibrahim, Kelly, Adams, & Glazebrook, 2013), and prevalence of depressive symptoms in this population are on the rise (Beiter et al., 2015; Eisenberg, Gollust, Golberstein, & Hefner, 2007; Zivin, Eisenberg, Gollust, & Golberstein, 2009). There is a need to better understand risk and protective factors associated with depressive symptoms for immigrant-origin college students.

In the Southeastern United States, students navigate multicultural milieus on diverse college campuses. Culture-related challenges associated with living in plural environments include perceived ethnic discrimination stress and acculturative stress. While identity formation is relevant across the lifespan, it is especially critical for adolescence and emerging adulthood (Smith & Silva, 2011), a time when individuals are still settling on identity-related beliefs and behaviors (Jensen & Arnett, 2012; Kroger & Marcia, 2011; Kroger, Martinussen, & Marcia, 2010; Syed & Azmitia, 2009). Ages 18 to 25 are especially salient (Arnett, 2000), since it is during this time that young adults

engage in a deeper reflection of various facets of their identity and gain greater autonomy over choosing peer groups with which they spend their time, resulting in a more complex understanding of the self in relation to the social world around them (Umaña-Taylor et al., 2014). As such, sociocultural factors such as ethnic identity, which are associated with psychological adjustment (Smith & Silva, 2011), are central to emerging adulthood. There is a need to more intentionally and precisely examine facets of ethnic identity (Rivas-Drake, Seaton, et al., 2014; Rivas-Drake, Syed, et al., 2014) in order to better understand how ethnic identity is related to psychological adjustment (Smith & Silva, 2011).

This dissertation integrated acculturation and social identity theories to examine conditions under which a specific aspect of ethnic identity—positive ethnic-racial affect—served as a risk or protective factor for psychological adjustment when immigrant-origin college students faced cultural stressors. Consistent with rejection sensitivity theory, it was predicted that stronger positive ethnic-racial affect would exacerbate the relation between perceived ethnic discrimination stress and depressive symptoms for emerging adults endorsing higher levels of other-group orientation, U.S.-born students, and females. In accordance with social identity theory, it was predicted that stronger positive ethnic-racial affect would attenuate the relation between acculturative stress and depressive symptoms for emerging adults endorsing higher levels of other-group orientation, U.S.-born students, and females.

The multiethnic sample included 290 emerging adults attending a public university in the Southeastern United States. The majority of the sample was female, freshman, and had lived in the U.S. for more than 10 years or their entire life. They ranged in age from 18-25, with a mean age just below 19 years old. A confirmatory factor analysis using items from the Societal, Attitudinal, Familial, and Environmental acculturative stress scale (Chavez, Moran, Reid, & Lopez, 1997; Mena, Padilla, & Maldonado, 1987) revealed adequate fit for a two-factor model yielding two related yet distinct cultural stress variables: perceived ethnic discrimination stress and acculturative stress.

Consistent with Social Identity Theory, Strong Positive Ethnic-Racial Affect is Generally Favorable

Contrary to hypotheses, which predicted that, in accordance with rejection sensitivity theory, stronger positive ethnic-racial affect would exacerbate the relation between perceived ethnic discrimination stress and depressive symptoms, results for all third-variable conditions were more consistent with social identity theory. Emerging adult females with stronger positive ethnic-racial affect endorsed a significantly weaker relation between perceived ethnic discrimination stress and depressive symptoms compared to emerging adult females with weaker positive ethnic-racial affect (Model 3). Two-way interactions revealed a protective effect for emerging adults endorsing both stronger positive ethnic-racial affect and stronger other-group orientation compared to those endorsing both weaker positive ethnic-racial affect and weaker other-group orientation (Model 1). Controlling for age, cultural stressors, and nativity status, there

was a statistically significant inverse linear relation between positive ethnic-racial affect and depressive symptoms (Model 2).

A similar inverse linear relation between positive ethnic-racial affect and depressive symptoms was found for regression analyses involving acculturative stress (Models 4, 5 and 6), demonstrating that stronger positive ethnic-racial affect was associated with fewer depressive symptoms. For the multicultural sample in this study, having a relatively stronger sense of belonging and affirmation toward one's ethnic group was generally associated with fewer depressive symptoms. Consistent with social identity theory, these significant inverse linear relations (for all Models) and buffering effects (by gender) are likely due to greater ingroup social support, sense of connectedness to one's group, and activation of thoughts about the unique aspects of this group (Cheryan & Tsai, 2007; Lee, Lee, Hu, & Kim, 2014; Tajfel & Turner, 2004; Yoo & Lee, 2009). It may be that some of these college students live within close range of ethnic ingroup members or are involved with cultural groups on campus, allowing them to reliably access supportive ingroup members.

For this multicultural emerging adult sample, having a strong sense of belonging to one's ethnic group does not place one more at risk for psychological maladjustment when faced with perceived ethnic discrimination stress or acculturative stress; on the contrary, having stronger positive ethnic-racial affect was generally psychologically advantageous. Overall, social identity theory was a more relevant framework compared to rejection sensitivity theory for examining the impact of sociocultural and cultural stress factors on psychological adjustment with this multicultural emerging adult sample.

The Impact of Stronger Positive Ethnic-Racial Affect Differs by Gender

Although there was a statistically significant association between perceived ethnic discrimination stress and depressive symptoms for the group of immigrant-origin emerging adult females in this sample, women endorsing weaker positive ethnic-racial affect demonstrated a significantly stronger relation compared to women endorsing stronger positive ethnic-racial affect. It appears that having a stronger sense of connectedness and affinity to one's ethnic group may buffer the impact of perceived ethnic discrimination stress on depressive symptoms for young adult females. These women may be using cognitive or social resources to protect against the negative impact of discrimination stress. It may be that certain cultural and gender socialization practices (e.g. encouraging collectivistic, ingroup inclusiveness and support) are beneficial when women are faced with discrimination stressors. This is consistent with both social identity theory and how Iturbide, Raffaelli and Carlo (2009), as well as Umaña-Taylor and Updegraff (2007), conceptualized their results, which demonstrated differences in how male and female ethnic minorities experience discrimination.

In this sample, men with weaker versus stronger positive ethnic-racial affect did not report a differential (i.e. slope differences) impact of positive ethnic-racial affect on the relation between perceived ethnic discrimination stress and depressive symptoms; however, men with stronger positive ethnic-racial affect demonstrated statistically significant increases in depressive symptoms as perceived ethnic discrimination stressors increased, whereas men with weaker positive ethnic-racial affect did not show significant changes in depressive symptoms as perceived ethnic discrimination stress increased.

This provides some support for rejection sensitivity theory in males, and suggests social identity and rejection sensitivity theories may be differentially salient depending on gender. One reason for this finding may be related to gender socialization practices, as discussed earlier. For females who are taught to utilize and foster social support from ethnic ingroup members, they may turn to these similar others when faced with ethnic discrimination and find comfort in either common experiences or social support, thereby lessening the deleterious impact of ethnic discrimination. In contrast, for males who are taught to develop independence and connectedness with outgroup others, they may avoid seeking support from ingroup members in the community or family unit when faced with ethnic discrimination, resulting in depressive symptoms such as a sense of hopelessness or loneliness.

Relatedly, Umaña-Taylor and Updegraff (2007) showed that older Latino adolescent males endorsing greater independence and connectedness with outgroup others (i.e. acculturation toward mainstream U.S. American culture) demonstrated a positive relation between ethnic discrimination and depressive symptoms, whereas this association was not significant for males endorsing less independence and connectedness with outgroup others. In contrast, women endorsed a positive association between ethnic discrimination and depressive symptoms regardless of acculturation level. It appears that, when faced with greater ethnic discrimination stress, males with stronger positive ethnic-racial affect may be more at risk for increases in depressive symptoms than males with weaker positive ethnic-racial affect. Further, the direction and strength of these relations may play out differently depending on the behavioral outcome under

investigation. For example, stronger positive ethnic-racial affect may demonstrate protective effects for males when the impact of cultural stressors on externalizing behavior or substance abuse is examined rather than internalizing psychopathology, which is oftentimes more relevant for females. Overall, these findings demonstrate differences both across and within genders.

Many young adults will enter the workforce when they finish college. This dissertation demonstrated that perceived ethnic discrimination has a negative impact on psychological adjustment for immigrant-origin college students, and other research has found that discrimination also has a negative impact on job hiring (Blommaert, van Tubergen & Coenders, 2012) as well as job retention, for both male and female adults. As a result of institutional discrimination and racial microaggressions in the workplace (Madera, King & Hebl, 2012; Offermann et al., 2014), discrimination was negatively associated with work satisfaction and positively related to intentions of leaving one's job (Madera, King & Hebl, 2012; Ojeda & Piña-Watson, 2013). Additionally, those who attempted to conceal or suppress their social identity (rather than openly reveal their identity) tended to report greater discrimination, likely because people may be less likely to inhibit prejudicial tendencies when they do not realize they are in the presence of someone who identifies as a member of a minority group (Madera, King & Hebl, 2012). Although these studies did not seek to identify differences by gender, these types of workplace injustices may be salient for immigrant-origin young adult men who endorse stronger positive ethnic-racial affect. In attempting to connect with outgroup members and embrace a sense of independence (Umaña-Taylor & Updegraff, 2007), men who

have a stronger sense of positive ethnic-racial affect may tend to suppress their ethnic identity more so than men without a strong sense of positive ethnic-racial affect. In doing so, they might report greater experiences of discrimination (Madera, King & Hebl, 2012), resulting in even greater depressive symptoms, as demonstrated in this dissertation.

This is further related to the notion of self-actualization potential, which is limited by restricted economic opportunities for ethnic minority individuals due to societal oppression, and in turn is associated with symptoms of depression such as hopelessness and despair (Hammack, 2003). In other words, ethnic discrimination may also be related to depressive symptoms when ethnic minority males sense limited occupational opportunities, especially for culturally traditional men who believe it is their responsibility to pursue these endeavors in order to support their family. Experiences of ethnic discrimination and the associated impact on depressive symptoms may be salient for men who adhere more strongly to traditional cultural values and believe they ought to provide financial resources for their family.

Conversely, women with a weaker sense of positive ethnic-racial affect may be especially at risk for psychological adjustment problems, whereas women who adhere relatively more strongly to traditional cultural values and endorse a stronger connectedness to their group experience protective effects. In this case, these women may have developed a sociocultural niche from which to draw support. It should be noted, however, that women with strong positive ethnic-racial affect still endorsed statistically significant increases in depressive symptoms as ethnic discrimination stress increased, suggesting that strong positive ethnic-racial affect isn't enough to completely

buffer the impact of discrimination on depressive symptoms; instead, it appears that stronger positive ethnic-racial affect lessened the deleterious association between ethnic discrimination and psychological adjustment for women.

This dissertation found that gender played a conditional role on how positive ethnic-racial affect impacts the relation between ethnic discrimination stressors and depressive symptoms. Social identity theory might be a more useful framework for females, whereas rejection sensitivity theory may be more consistent with the experience of males. This is not the first study in which both social identity and rejection sensitivity theories may be relevant for distinct groups of individuals within a sample of immigrant-origin young adults. In a study examining Asian-origin college students, Yoo and Lee (2009) found that nativity played a conditional role on how ethnic identity impacted the relation between imagined racial discrimination and negative affect. Specifically, negative affect significantly increased as number of imagined racial discrimination experiences increased for foreign-born individuals endorsing weak ethnic identity, whereas those endorsing stronger ethnic identity showed no significant changes as imagined racial discrimination increased (consistent with social identity theory). In contrast, negative affect significantly increased as number of imagined racial discrimination experiences increased when U.S.-born college students endorsed strong ethnic identity, whereas those endorsing weaker ethnic identity showed no significant changes as imagined racial discrimination increased (consistent with rejection sensitivity theory). Social identity and rejection sensitivity theories may be differentially salient depending on the type of group examined.

Strong Positive Ethnic-Racial Affect may be Especially Protective for Young Adults Open to Relationships with Ethnic Outgroups

Although the three-way interaction between perceived ethnic discrimination stress x positive ethnic-racial affect x other-group orientation was statistically significant (Model 1), differential effect sizes occurred at more extreme levels of other-group orientation (i.e. beyond -1 SD to +1 SD from the mean), resulting in no significant slope differences within the -1 SD to +1 SD region. For the acculturative stress x positive ethnic-racial affect x other-group orientation interaction (Model 4), there was a statistically significant slope difference such that immigrant-origin emerging adults with greater other-group orientation and weaker positive ethnic-racial affect endorsed a larger increase in depressive symptoms as acculturative stress increased compared to those endorsing lesser other-group orientation and weaker positive ethnic-racial affect. Although these results are not as clearly delineated as those found by gender, trend-level findings show stronger relations between cultural stressors and depressive symptoms for those with greater other-group orientation and weaker positive ethnic-racial affect compared to those with greater other-group orientation and stronger positive ethnic-racial affect. Ultimately, it appears that those who desire connectedness to ethnic outgroup members, yet have weaker positive ethnic-racial affect, are at greater risk for depressive symptoms; on the other hand, those who desire connectedness with ethnic outgroup members, yet have stronger positive ethnic-racial affect, experience a protective effect against depressive symptoms.

Those who desire to connect with members of cultural outgroups, but lack a sense of ingroup connectedness, are impacted more negatively by perceived ethnic discrimination compared to those who desire to connect with members of cultural outgroups yet also endorse a sense of strong ingroup connectedness. This is likely because the former are treated unfairly by individuals with whom they endeavor to connect (Banks & Kohn-Wood, 2007; Schaafsma, 2011), and their weaker sense of positive ethnic-racial affect may indicate fewer coping resources in the form of ingroup social support and sense of identification, which could explain the increase in depressive symptoms. This same pattern appears to occur when immigrant-origin emerging adults are faced with acculturative stress. Specifically, immigrant-origin young adults lacking ingroup social support or sense of ingroup identification who are attempting to connect with outgroup others appear to be at greater risk for depressive symptoms as cultural challenges increase. For individuals who desire outgroup connectedness and endorse strong ingroup belongingness, increased acculturation challenges were not associated with greater depressive symptoms, suggesting that positive ethnic-racial affect may play a supportive and protective role, especially for immigrant-origin young adults who wish to explore relationships outside of their ethnic group.

This finding is congruous with Umaña-Taylor and Updegraff (2007), who found that, for older Latino adolescent males reporting higher levels of acculturation (toward mainstream U.S. American culture), there was a positive relation between ethnic discrimination and depressive symptoms; this association was not significant for males reporting lower levels of acculturation. It appears that movement toward the mainstream

culture and ethnic outgroups placed these Latino males more at risk for ethnic discrimination and subsequent depressive symptoms. The results of this dissertation added nuances to this relation and showed that stronger positive ethnic-racial affect may exacerbate the impact of ethnic discrimination stress on depressive symptoms for males who desire to develop connections with ethnic outgroups. It would be beneficial for Umaña-Taylor and Updegraff (2007) to test whether positive ethnic-racial affect intensifies the relation between ethnic discrimination and depressive symptoms in the relatively more acculturated group of males. Further, although females in their study endorsed a positive, linear association between ethnic discrimination and depressive symptoms regardless of acculturation level (toward mainstream U.S. American culture), this dissertation showed that assessing for positive ethnic-racial affect could actually show a buffering effect on this relation for females endorsing stronger positive ethnic-racial affect.

Overall, for immigrant-origin young adults wishing to establish relationships with ethnic outgroup members, strong positive ethnic-racial affect may be particularly protective against depressive symptoms as cultural stressors increase. The ethnic ingroup may serve as a support and secure base from which to explore new relationships, or it may be that these individuals more effectively navigate cultural stressors since they have more robust social resources (i.e. members of both their ethnic ingroup and ethnic outgroups) from which to access during times of cultural stress. These findings are generally consistent with Nguyen and Benet-Martínez (2013), indicating that acculturative integration and biculturalism tend to be less strongly associated with

psychological adjustment problems (and more strongly associated with psychological well-being) than other types of acculturation attitudes and approaches such as assimilation, separation and marginalization (Berry & Sabatier, 2011).

Limitations and Future Directions

This study is not without limitations. First, it has been suggested that experiences with ethnic discrimination are aversive yet prompt one to engage in coping behaviors, which in turn results in a heightened sense of personal and collective well-being after finding solace in the protective impact of ingroup membership (Branscombe, Schmitt, & Havey, 1999). Much of the literature on this *rejection identification* theory involves longitudinal designs and mediation analyses (e.g. Giamo, Schmitt, & Outten, 2012), which ultimately show that individuals may develop a repertoire of coping skills *after* being subjected to ethnic discrimination. One factor that may confound the notion of social identity theory versus rejection sensitivity theory involves the extent to which immigrant-origin young adults have engaged in the rejection identification process. One hypothesis for future research is that those who have accomplished a stronger sense of identity following a rejection identification process might possess a more robust repertoire of coping skills, and they may turn to these resources (e.g. social support) when faced with ethnic discrimination (consistent with social identity theory); in contrast, those who have not engaged in a rejection identification process may endorse greater psychological distress resulting from a weaker repertoire of coping resources (consistent with rejection sensitivity theory). As such, whether psychological reactions to ethnic discrimination stress are more consistent with social identity theory or that of rejection

sensitivity theory may actually depend on whether one has engaged in the rejection identification process and subsequently developed an adaptive set of responses.

Rejection identification may also explain why social identity theory is more relevant for the emerging adult sample in this dissertation compared to rejection sensitivity theory: by young adulthood, many of these individuals may have already experienced ethnic discrimination or acculturation-related stressors and have developed a set of coping mechanisms in response to specific cultural stressors. This would make sense, given the majority of this sample reported residing in the United States for 10 years or longer.

Additionally, this dissertation and studies examining rejection identification typically measure subjective perceptions of stress, or stress appraisal. Other factors that might change how psychological reactions to ethnic discrimination stress are conceptualized include how stress is measured (i.e. degree of exposure to potentially stressful events, physiological responses to stress, or subjective perceptions of stress; Caplan, 2007) and the extent to which one adaptively copes with stress. The study of neuroendocrine responses to ethnic discrimination in young adults is a burgeoning field, since measurement of physiological stress responses via cortisol, for example, is becoming more accessible and feasible (e.g. Zeiders, Hoyt, & Adam, 2014). One hypothesis is that, only when discrimination “hurts” (Huynh & Fuligni, 2010) and subsequently elicits a physiological stress response, will psychopathology depend on the type of coping strategy (e.g. ingroup social support or illicit substance use) used. In this case, moderating factors are conceptualized from within a stress and coping framework (e.g. Lazarus & Folkman, 1984) instead of a sociocultural framework (e.g. social identity

and rejection sensitivity theories). It is likely that both sociocultural and coping factors influence the impact of ethnic discrimination on psychological adjustment, and empirical research would ideally benefit from including both frameworks into a measureable theoretical model.

Second, this multiethnic sample was diverse with respect to gender, nativity, and length of time having lived in the United States; therefore, many of the aforementioned results cannot be generalized to specific groups. Also, the categorical nature of one particular demographic variable in this dissertation did not adequately distinguish between participants who might be considered temporary international students compared to those who had permanently resettled in order to obtain a better education. This is a limitation for a number of studies using cross-generational samples (e.g. Iwamoto & Liu, 2010; Noels, Pon, & Clement, 1996; Yoo & Lee, 2009), while other studies do not address whether their sample included international students (e.g. Iturbide, Raffaelli, & Carlo, 2009). Some authors (e.g. Noels, Pon, & Clement, 1996) argue that heterogeneous samples with respect to acculturation factors (i.e. amount of exposure to the receiving culture) allow for sample variation that preserves the true heterogeneity of a given social context. Nonetheless, the link between ethnic discrimination and depressive symptoms, and acculturative stressors and depressive symptoms, has been demonstrated in samples of international students (e.g. Constantine, Okazaki, & Utsey, 2004). Two strengths of the sample in this dissertation involve the restriction of age to young adults, which is consistent with developmental theory, as well as the restriction of the sample to first- and second-generation participants only. Many of the aforementioned studies include both a

broad age range (e.g. ages 18-40) as well as heterogeneous acculturation factors (e.g. third generation and beyond), which may confound findings. Despite these limitations, these results can be tentatively generalized to college campuses composed of a similarly diverse population of students in the Southeastern United States, and possibly to other campuses in communities that serve as “receiving sites” for immigrant-origin adolescents and young adults. While the generalizability of these results is somewhat limited, constructs were intentionally chosen on the basis of cross-cultural applicability. As such, the statistically significant findings with respect to other-group orientation and gender should not be discounted, and could play similarly influential roles with both homogeneous cultural groups and heterogeneous cultural groups in other regions of the United States.

Next, the focus of this dissertation was to determine how particular cross-culturally relevant factors impacted psychological adjustment. As such, it was beyond the scope of this study to examine variation within ethnic groups, which would require a substantially larger sample size, such as one acquired by Donovan et al. (2013). Nonetheless, given that two of the three-way interactions in this dissertation were nearing statistical significance (Models 5 and 6), and one was not statistically significant (Model 2), it may be beneficial to examine variation within homogeneous ethnic groups, which may elucidate the near-significant results for nativity status. In fact, as previously described, Yoo and Lee (2009) found differences by nativity status within an Asian-only young adult sample, and most of the extant studies examined for this dissertation that demonstrated exacerbating effects for positive ethnic-racial affect (on the relation

between perceived ethnic discrimination stress and psychological adjustment) included Asian-only samples. Additionally, although this study chose to group emerging adults by nativity status, other secondary moderators might include length of time in the United States, community of reception, age at time of immigration, receiving culture language competency at time of immigration, and extent to which someone has adopted the practices, values and identifications of the U.S. American culture. Further, it would be worthwhile to examine outcome factors that tend to be more relevant for males than females, such as externalizing behaviors or substance abuse. In sum, it would be beneficial to examine other outcome variables and test for other types of groups that serve as potential third-variable moderators. The latter might involve, for example, using a latent profiles approach to extract specific groups based on variability of various culturally relevant factors.

Further, it appears that multiethnic individuals are increasingly represented in minority and migrant-origin samples (e.g. Giamo, Schmitt, & Outten, 2012). If future studies do in fact demonstrate that ethnic identity plays a differential role for multiethnic versus ethnically homogeneous students, in what ways do students from multiethnic backgrounds conceptualize their positive ethnic-racial affect? This is a burgeoning field of study that must be incorporated into literature that jointly examines sociocultural and psychological adjustment. For example, it would be beneficial to examine how constructs such as bicultural identity integration (Benet-Martínez & Haritatos, 2005) is related to psychological adjustment at different points during the migration experience. In doing so, researchers would better understand the sociocultural challenges associated

with immigrant-origin adolescents and emerging adults from diverse backgrounds.

Understanding cultural identifications of multiethnic individuals might involve mixed-methods designs that would include, for example, a narrative component that could enable individuals to explain and describe their identity.

Moreover, the ethnic discrimination measure in this dissertation asked about discriminatory experiences broadly. As such, perceived ethnic discrimination cannot be limited to experiences on the college campus. It was not the purpose of this study to identify the specific context and source of perceived ethnic discrimination, although the importance of understanding these nuances are gaining recognition in literature (e.g. Benner & Graham, 2013; White, Zeiders, Knight, Roosa, & Tein, 2014). It would be useful to know *where* unfair treatment occurred on the basis of ethnic background, under *which condition* this occurred, and by *whom*, and whether this *changed* contingent on length of residency in the United States. Also, the internal consistency of the discrimination variable is somewhat low. Like a trauma checklist or life events checklist, some participants may simply not experience particular discrimination stressors, which would reduce internal consistency of this variable. Additionally, with only 6 items, it may be that some discrimination-related stressors are simply more bothersome than others.

Finally, while depressive symptoms have been shown to be higher among college students relative to the general population (Ibrahim, Kelly, Adams, & Glazebrook, 2013), the sample in this study endorsed a relatively low mean depression score. This may be related to factors such as immigrant optimism, a sense of achievement related to familial

expectations to attend college, or effective coping strategies within this particular sample. It may be beneficial for future research to examine whether migrant-origin college students on other campuses are endorsing similarly low mean levels of depression. If this were the case, it would be beneficial to understand why and how migrant-origin emerging adults are endorsing fewer depressive symptoms compared to their non-migrant peers on college campuses. Additionally, the generalizability of these findings is limited to migrant-origin emerging adults on college campuses. It would be beneficial to examine these same factors for migrant-origin young adults not attending college, as some research suggests that migrants may experience cultural stress differently across contexts such as home, neighborhood, or the workplace (e.g. Amason, Allen, & Holmes, 1999; Bai, 2016; Tummala-Narra, Deshpande, & Kaur, 2016).

Conclusion

This dissertation is timely since there are changing logistical, economic, and political demands in response to an increasing number of displaced persons globally. Immigrant-origin individuals in the United States face acculturation challenges associated with living in culturally plural societies. It is paramount to understand how sociocultural factors impact psychological adjustment for immigrant-origin emerging adults, as these persons will become contributing members to various professional sectors within the United States. Although research has demonstrated mixed results with respect to the impact of ethnic identity on the relation between cultural stressors and psychological adjustment, this dissertation illustrated how using moderated moderation analyses, or three-way interactions, to study a specific facet of ethnic identity can uncover valuable

nuances in sociocultural and psychological adjustment, which has elucidated some of the mixed findings in extant literature.

This dissertation demonstrated that positive ethnic-racial affect is generally advantageous for psychological adjustment across the multicultural sample, especially for females. When paired with greater other-group orientation, stronger positive ethnic-racial affect was also associated with fewer depressive symptoms compared to immigrant-origin emerging adults with weaker positive ethnic-racial affect. These findings are generally consistent with social identity theory and suggest that ethnically diverse immigrant-origin emerging adults on this particular multicultural campus reap the social and sociocognitive benefits of maintaining a sense of connectedness and affinity toward their ethnocultural group. One exception is that males endorsing a stronger positive ethnic-racial affect demonstrated significant increases in depressive symptoms as perceived ethnic discrimination stress increased, which is somewhat consistent with rejection sensitivity theory. Another notable finding is that risk for depressive symptoms is higher in individuals with a weaker positive ethnic-racial affect and a stronger desire to connect with cultural outgroups. In this case, it appears that experiences with greater perceived ethnic discrimination and acculturative stressors may be deleterious since these young adults are seeking social connectedness with individuals who are treating them unfairly or making the acculturation process more challenging; yet at the same time, these young adults have a weaker cultural ingroup from which to access coping strategies such as social support and an affective sense of belonging.

The findings of this dissertation have important clinical implications, especially on college campuses with immigrant-origin emerging adults. Specifically, practitioners may wish to assess for strength of one's positive ethnic-racial affect, experiences with perceived ethnic discrimination stressors, and strength of other-group orientation, as well as the extent to which these interact with one another and gender. Doing so may provide insight into factors that contribute to psychological adjustment, especially for clients presenting with depressive symptoms. This study also substantiates the need for client case conceptualization to include developmentally and culturally relevant factors in psychotherapeutic intervention and psychodiagnostic evaluation.

Beyond clinical practice, this study is further evidence for the need to address public policy that discourages unjust and unfair treatment on the basis of one's ethnic background and gender identification, while also encouraging the simultaneous development of both positive ethnic-racial affect and connectedness with members of ethnic outgroups. One appropriate and feasible context for implementing such policy includes college campuses via outreach and programming, which would ideally extend to all members of the academic community. With respect to an integrative care approach, it would be valuable for behavioral health care providers, medical practitioners, campus committee chairs, dormitory advisors, and faculty members to recognize the impact of cultural stressors on immigrant-origin students, and leverage this awareness by working together to reduce discrimination and increase migrant individuals' healthy sociocultural adaptation and psychological adjustment.

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APPENDIX A

TABLES

Table 1

Multiethnic Group Classifications based on Parent Cultural Background

Number of Participants	Father's Ethnic Background	Mother's Ethnic Background
1	Asian	Black
1	Asian	Not specified
4	Black	Asian
1	Black	Caribbean
1	Black	Latino
1	Black	Middle Eastern
3	Black	Multiethnic
1	Black	White
3	Latino	Black
1	Latino	Latino
9	Latino	White
1	Middle Eastern	Asian
2	Middle Eastern	White
5	Multiethnic	Multiethnic
1	Native American	Asian
1	Not specified	Asian
1	Not specified	Not specified
9	White	Asian
9	White	Latino
1	White	Mixed
1	White	Native American
2	White	White

Note. n = 59. Same ethnic grouping for each parent (e.g., Father = Latino *and* Mother = Latino) indicates either different countries of origin, or the participant did not specify country of origin but indicated a multiethnic identity. When Father = White and Mother = White, the participant indicated a multiethnic identity that included a non-U.S. American component (e.g., Iranian-American).

Table 2

Confirmatory Factor Analysis Fit Indices for a Two-Factor Model involving Perceived Ethnic Discrimination Stress and Acculturative Stress

SRMR	RMSEA			CFI	χ^2	χ^2 df
	LB	Estimate	UB			
.072	.074	.089	.100	.930	173.90 ($p < .001$)	53

Note. N = 290. SRMR = Standardized root mean square residual; RMSEA = Root mean square error of approximation; LB and UB = lower bound and upper bound, respectively, of the 90% confidence interval; CFI = Comparative fit index; χ^2 = minimum fit function chi-square estimate (C1); df = degrees of freedom

Table 3

Pearson Correlations and Descriptive Statistics

	1	2	3	4	5	6	7	8	9
1. Depressive Symptoms									
2. Age	.16**								
3. Gender ^a	-.10	.00							
4. Length of time in U.S.	.02	-.18**	-.01						
5. Nativity ^b	.03	-.20***	.01	.56***					
6. Positive ethnic-racial affect	-.22***	.02	-.12*	.03	-.02				
7. Other-group orientation	-.05	-.02	.02	.13*	.09	.22***			
8. Discrimination stress	.29***	.06	-.10 [†]	-.06	-.04	.08	-.10 [†]		
9. Acculturative stress	.15**	.19***	.03	-.49***	-.42***	.07	-.25***	.46***	
Mean (SD)	0.40 (0.38)	18.87 (1.32)				3.22 (0.60)	3.38 (0.49)	2.47 (0.71)	1.81 (0.79)
Sample range	0.00 – 2.10	18-24 years				1.20 – 4.00	2.00 – 4.00	1.00 – 5.00	1.00 – 5.00
Questionnaire range	0.00 – 3.00					1.00 – 4.00	1.00 – 4.00	0.00 – 5.00	0.00 – 5.00

Note. N = 290.

^aGender = 0 female, 1 male. ^bNativity = 0 foreign born, 1 US born.

*** $p < .001$ ** $p < .01$ * $p < .05$ [†] $p < .10$

Table 4

Regression Analyses Exhibiting the Final Models for Perceived Ethnic Discrimination Stress

Dependent variable: Depressive Symptoms	Unstandardized Coefficient (SE)	ΔR^2	R^2 (MSE)
Model 1: Other Group Orientation			.20*** (.01)
Constant	.13*** (.01)		
Age	.01* (.00)		
Discrimination stress	.05*** (.01)		
Acculturative stress	.00 (.01)		
Positive ethnic-racial affect (PERA)	-.04*** (.01)		
Other-group orientation (OGO)	.01 (.01)		
Discrimination stress x PERA	.00 (.02)		
Discrimination stress x OGO	-.01 (.02)		
PERA x OGO	-.05* (.02)		
Discrimination Stress x PERA x OGO	-.05* (.02)	.02*	
Model 2: Nativity			.18*** (.01)
Constant	.13*** (.01)		
Age	.01* (.01)		
Discrimination stress	.04*** (.01)		
Acculturative stress	.01 (.01)		
Positive ethnic-racial affect (PERA)	-.04*** (.01)		
Nativity	.02 (.01)		
Discrimination stress x PERA	-.01 (.01)		
Discrimination stress x Nativity	.01 (.02)		
PERA x Nativity	.00 (.02)		
Discrimination stress x PERA x Nativity	.03 (.03)	.00	
Model 3: Gender			.20*** (.01)
Constant	.13*** (.01)		
Age	.01* (.00)		
Discrimination stress	.05*** (.01)		
Acculturative stress	.00 (.01)		
Positive ethnic-racial affect (PERA)	-.05*** (.01)		
Gender	-.02* (.01)		
Discrimination stress x PERA	-.01 (.01)		
Discrimination stress x Gender	-.02 (.02)		
PERA x Gender	.00 (.02)		
Discrimination stress x PERA x Gender	.07** (.03)	.02*	

Note. N = 290. All independent variables are mean centered with the exception of Nativity and Gender, which are dichotomized (Foreign-born = 0, U.S.-born = 1; Female = 0, Male = 1). SE = standard error. MSE = mean standard error.

*** $p < .001$ ** $p < .01$ * $p < .05$

Table 5

Conditional Effect of Perceived Ethnic Discrimination Stress by Positive Ethnic-Racial Affect Interaction across Gender for Model 3

Gender	Effect (SE)
Female	-.03 (.01)*
Male	.04 (.03) [†]

Note. SE = standard error.

* $p < .05$ [†] $p < .10$

Table 6

Conditional Effect of Perceived Ethnic Discrimination Stress on Depressive Symptoms at Values of Gender for Model 3

Gender	Positive ethnic-racial affect	Effect (SE)
Female	-1 SD (-0.60)	.07 (.02)***
Female	Mean (0.00)	.06 (.01)***
Female	+1 SD (0.60)	.04 (.02)**
Male	-1 SD (-0.60)	.01 (.02)
Male	Mean (0.00)	.04 (.02)*
Male	+1 SD (0.60)	.06 (.02)*

Note. SE = standard error.

*** $p < .001$ ** $p < .01$ * $p < .05$

Table 7

Regression Analyses Exhibiting the Final Models for Acculturative Stress

Dependent variable: Depressive Symptoms	Unstandardized Coefficient (SE)	ΔR^2	R^2 (MSE)
Model 4: Other Group Orientation			.21*** (.01)
Constant	.14*** (.01)		
Age	.01* (.00)		
Discrimination stress	.05*** (.01)		
Acculturative stress	.01 (.01)		
Positive ethnic-racial affect (PERA)	-.05*** (.01)		
Other-group orientation (OGO)	.00 (.01)		
Acculturative stress x PERA	.00 (.01)		
Acculturative stress x OGO	.02 (.02)		
PERA x OGO	-.05** (.02)		
Acculturative stress x PERA x OGO	-.06* (.01)	.02*	
Model 5: Nativity			.19*** (.01)
Constant	.13*** (.01)		
Age	.01* (.00)		
Discrimination stress	.04*** (.01)		
Acculturative stress	.01 (.01)		
Positive ethnic-racial affect (PERA)	-.03* (.01)		
Nativity	.02 (.01)		
Acculturative stress x PERA	.03 [†] (.02)		
Acculturative stress x Nativity	.00 (.02)		
PERA x Nativity	.01 (.02)		
Acculturative stress x PERA x Nativity	.06 [†] (.03)	.01 [†]	
Model 6: Gender			.18*** (.01)
Constant	.13*** (.01)		
Age	.01* (.00)		
Discrimination stress	.04*** (.01)		
Acculturative stress	.00 (.01)		
Positive ethnic-racial affect (PERA)	-.04*** (.01)		
Gender	-.02 [†] (.01)		
Acculturative stress x PERA	.02 (.02)		
Acculturative stress x Gender	.01 (.02)		
PERA x Gender	.00 (.02)		
Acculturative stress x PERA x Gender	.05 [†] (.03)	.01 [†]	

Note. N = 290. All independent variables are mean centered with the exception of Nativity and Gender, which are dichotomized (Foreign-born = 0, U.S.-born = 1; Female = 0, Male = 1). SE = standard error. MSE = mean standard error.

*** $p < .001$ ** $p < .01$ * $p < .05$ [†] $p < .10$

APPENDIX B

FIGURES

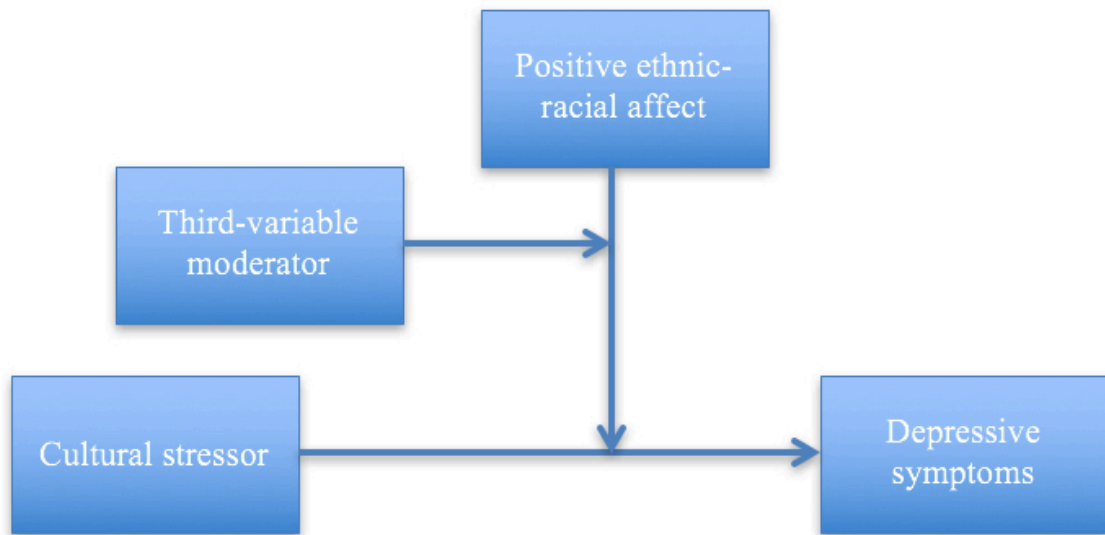


Figure 1. General Conceptual Model. This model hypothesizes that the moderating impact of positive ethnic-racial affect on the relation between cultural stressors and depressive symptoms will vary by third-variable moderators.

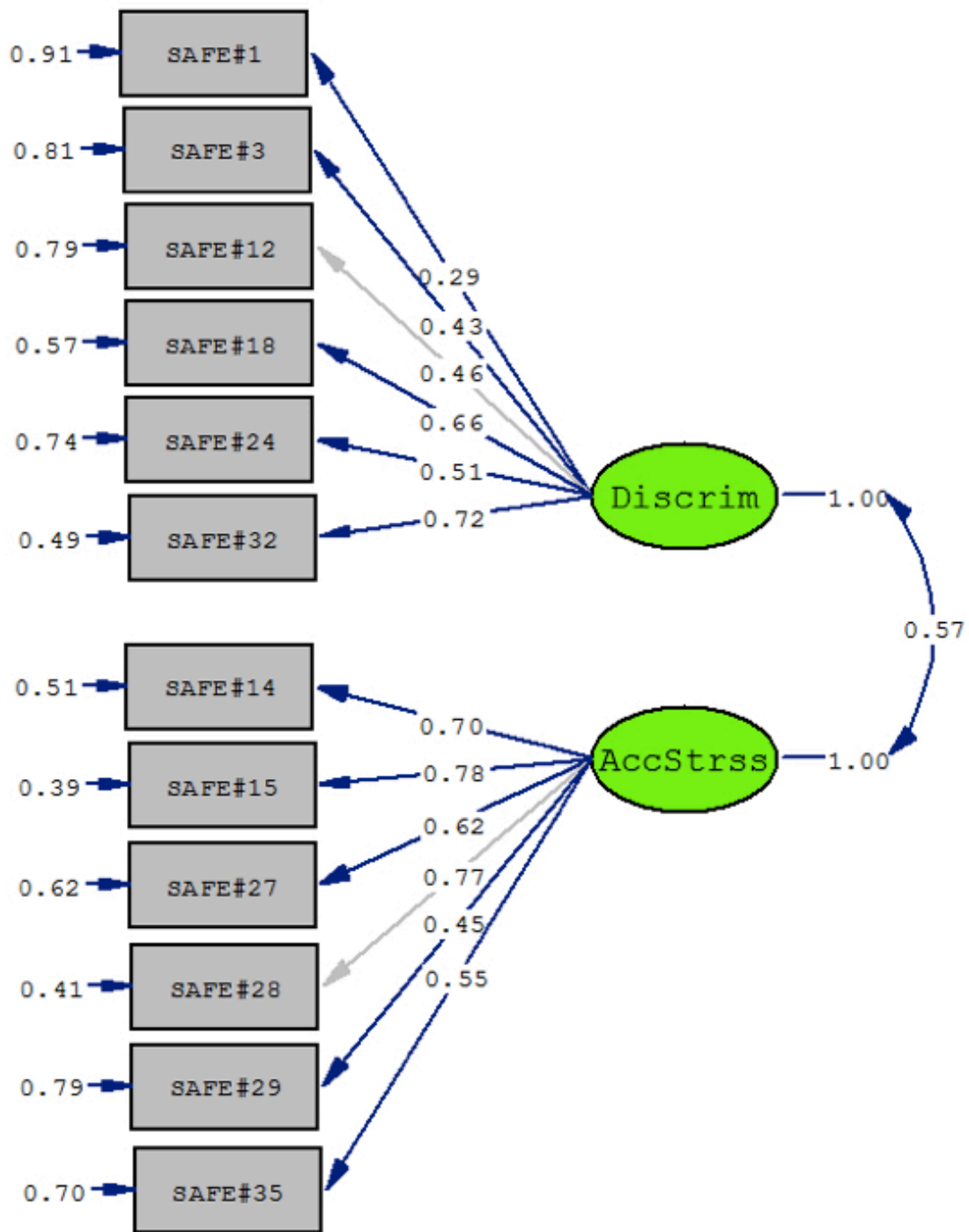


Figure 2. Hypothesized Relations for Confirmatory Factor Analysis. Standardized estimated are shown. Constrained paths are depicted by light gray, one-sided arrows (i.e. items 12 and 28). Discrim = perceived ethnic discrimination stress. AccStrss = acculturative stress. SAFE = Societal, Attitudinal, Familial, and Environmental acculturative stress scale.

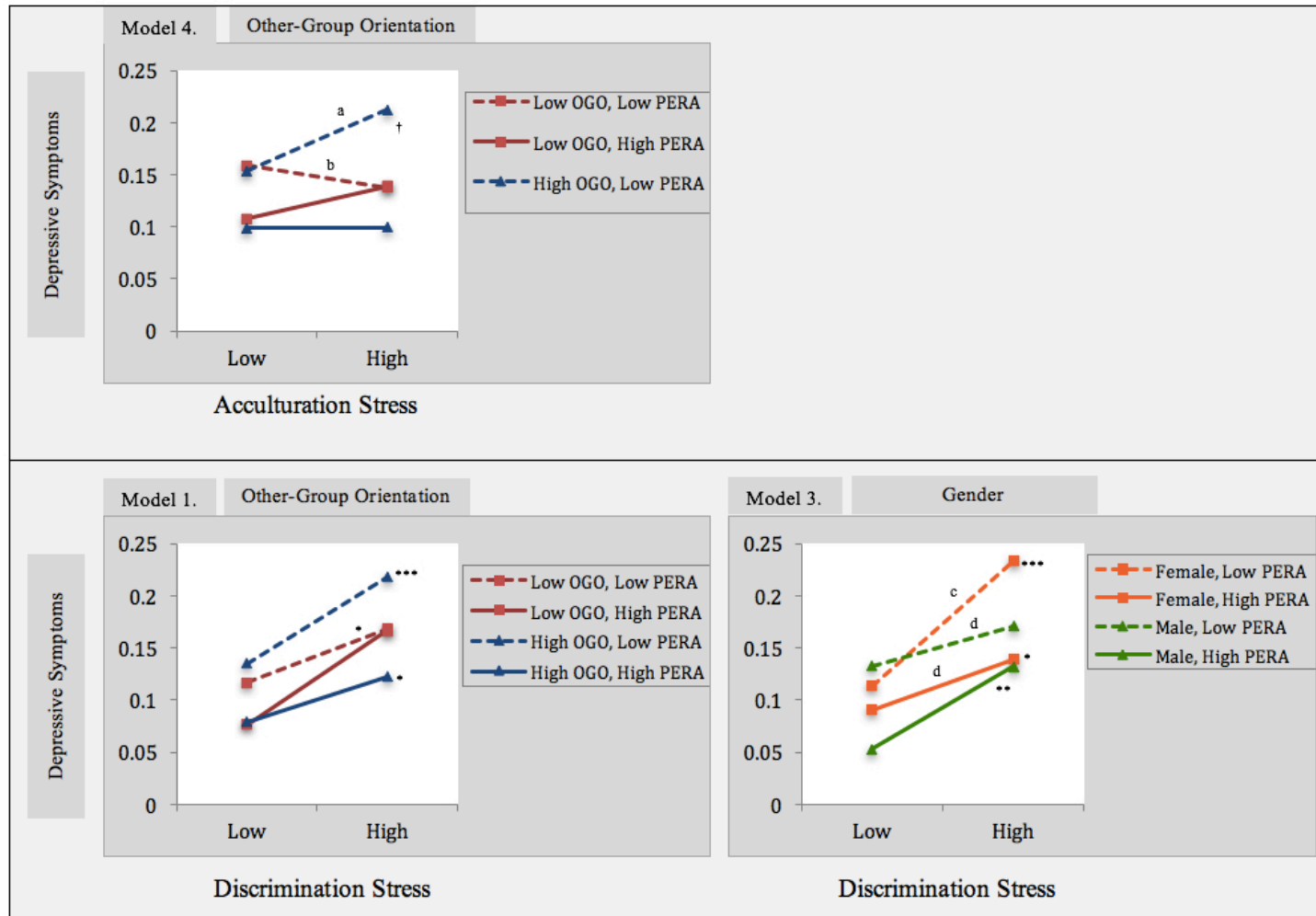


Figure 3. *Graphical Results.* These show simple slope and slope difference tests. Superscripts ^a and ^b ($p < .01$), and ^c and ^d ($p < .05$), indicate statistically significant slope differences, respectively.

[†] $p < .10$ * $p < .05$ *** $p < .001$

APPENDIX C
QUESTIONNAIRES

Demographic Items

1. How long have you lived in the United States?

Less than 1 year

Between 1-3 years

Between 3-5 years

Between 5-10 years

More than 10 years or entire life

2. What is your country of origin?

(Write-in)

3. Were you born in the United States?

Yes

No

4. Was your father born in the United States?

Yes

No

5. Was your mother born in the United States?

Yes

No

6. Year and month of birth.

(Write-in)

7. Gender.

Female

Male

*Societal, Attitudinal, Familial, and Environmental Acculturative Stress Scale (SAFE)

Directions. Here in the United States there are many groups of people from different cultural backgrounds. People sometimes identify with the culture that they belong to: Japanese, German, Latino, Cambodian, Liberian, Haitian, etc. Think about your culture group. The following statements are things you may or may not think about. Indicate whether and how much each thing bothers you.

Response options:

- (1) Doesn't Bother Me
- (2) Almost Never Bothers Me
- (3) Sometimes Bothers Me
- (4) Often Bothers Me
- (5) Bothers Me a Lot

Perceived Ethnic Discrimination Stress

- 1. I feel bad when others make jokes about people who are in the same group as me.**
- 3. I have more things that get in my way than most people do.**
- 12. Many people believe certain things about the way people in my group act, think, or are, and they treat me as if those things are true.**
- 18. I often feel that people purposely try to stop me from getting better at something.**
- 24. Because of the group I am in, I don't get the grades I deserve.**
- 32. Because of the group I am in, I feel others don't include me in some of the things they do, games they play, etc.**

Acculturative Stress

- 4. It bothers me that people in my family who I am close to don't understand the things that I think are important, that are new to them.
- 5. People in my family who I am close to have plans for when I grow up that I don't like.
- 8. It's hard for me to tell my friends how I really feel.
- 9. I don't have any close friends.
- 14. I don't feel at home here in the United States.**
- 15. People think I am shy, when I really just have trouble speaking English.**
- 20. It bothers me when people force me to be like everyone else.
- 22. I often feel like people who are supposed to help are really not paying any attention to me.
- 27. It bothers me that I have an accent.**
- 28. It's hard to be away from the country I used to live in.**
- 29. I think a lot about my group and its culture.**
- 33. It's hard for me to "show off" my family.
- 34. People think badly of me if I practice customs or I do the "special things" of my group.
- 35. I have a hard time understanding what others say when they speak.**

*Per confirmatory factor analysis, only bolded items were included in the discrimination and acculturative stress variables for this study.

Multigroup Ethnic Identity Measure (MEIM)

Directions. In the United States people come from a lot of different cultures and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Mexican-American, Hispanic, Black, Asian-American, American Indian, Anglo-American, and White. Every person is born into an ethnic group, or sometimes two groups, but people differ on how important their ethnicity is to them. These questions are about your ethnicity or ethnic group and how you feel about it or react to it.

In terms of ethnic group, I consider myself to be _____

Use the numbers below to indicate how much you agree or disagree with each statement.

- (1) Strongly disagree
- (2) Disagree
- (3) Agree
- (4) Strongly agree

Affirmation and Belonging

- 6. I am happy that I am a member of the group I belong to.
- 11. I have a strong sense of belonging to my own ethnic group.
- 14. I have a lot of pride in my ethnic group and its accomplishments.
- 18. I feel a strong attachment towards my own ethnic group.
- 20. I feel good about my cultural or ethnic background.

Other Group Orientation

- 4. I like meeting and getting to know people from ethnic groups other than my own.
- 7. I sometimes feel it would be better if different ethnic groups didn't try to mix together.
- 9. I often spend time with people from ethnic groups other than my own.
- 15. I don't try to become friends with people from other ethnic groups.
- 17. I am involved in activities with people from other ethnic groups.
- 19. I enjoy being around people from ethnic groups other than my own.

21. My ethnicity is

- (1) Asian or Asian American,
- (2) Black or African American
- (3) Hispanic or Latino
- (4) White, Caucasian, Anglo, or European
- (5) American Indian
- (6) Mixed; Parents are from two different groups
- (7) Other (write in): _____

22. My father's ethnicity is (use numbers above)

23. My mother's ethnicity is (use numbers above)

Beck Depression Inventory (BDI)

1. 0 I do not feel sad.
1 I feel sad
2 I am sad all the time and I can't snap out of it.
3 I am so sad and unhappy that I can't stand it.
2. 0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel the future is hopeless and that things cannot improve.
3. 0 I do not feel like a failure.
1 I feel I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failures.
3 I feel I am a complete failure as a person.
4. 0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.
5. 0 I don't feel particularly guilty
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.
6. 0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.
7. 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.
8. 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.
9. 0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.
10. 0 I don't cry any more than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.

11. 0 I am no more irritated by things than I ever was.
1 I am slightly more irritated now than usual.
2 I am quite annoyed or irritated a good deal of the time.
3 I feel irritated all the time.
12. 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.
13. 0 I make decisions about as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions more than I used to.
3 I can't make decisions at all anymore.
14. 0 I don't feel that I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel there are permanent changes in my appearance that make me look unattractive
3 I believe that I look ugly.
15. 0 I can work about as well as before.
1 It takes an extra effort to get started at doing something.
2 I have to push myself very hard to do anything.
3 I can't do any work at all.
16. 0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.
17. 0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.
18. 0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.
19. 0 I haven't lost much weight, if any, lately.
1 I have lost more than five pounds.
2 I have lost more than ten pounds.
3 I have lost more than fifteen pounds.
20. 0 I am no more worried about my health than usual.
1 I am worried about physical problems like aches, pains, upset stomach, or constipation.
2 I am very worried about physical problems and it's hard to think of much else.
3 I am so worried about my physical problems that I cannot think of anything else.

21. 0 I have not noticed any recent change in my interest in sex.
 1 I am less interested in sex than I used to be.
 2 I have almost no interest in sex.
 3 I have lost interest in sex completely.